The Journal of the Michigan State Medical Society

PUBLISHED UNDER THE DIRECTION OF THE COUNCIL

Vol IX BATTLE CREEK, MICHIGAN, SEPTEMBER, 1910 No. 9

ORIGINAL ARTICLES

SOME EXPERIMENTS IN INTESTINAL ANASTOMOSIS*

CONRAD GEORG, JR., A. ., M. D.

Ann Arbor, Michigan

Previous to the application of antiseptic principles to surgical technique, the operations of intestinal resection and anastomosis were considered to be extremely dangerous and were very rarely performed. The history of the development of this branch of surgery is extremely interesting.

The very earliest period in which an intestinal suture is mentioned by Celus, A. D. 20, and the first description of it was given by the Italian surgeons of the Middle Ages. The statement is made in the literature that Guilielmus de Saliceto (about 1500) sutured the bowel over a segment of dried intestine. He employed also the so-called suture of the "Four Masters" which consisted of four interrupted sutures passed through the divided bowel and the trachea of a goose which had been inserted within the bowel to keep the lumen open.

Even in 1686 it was considered too dangerous to suture wounds of the small intestine as can be seen by consulting the writings of Richard Wiseman who used the glover's stitch in suturing wounds of the large intestine. Heister in 1739 thought that it was useless to suture the intestine on account of the high mortality attending it but preferred the glover's stitch in case the operation was done at all. Thus it appears that during the last century and up to about 1812 it was the general opinion among surgeons that wounds of the small intestine ought never to be sutured and that it was practically a hopeless operation to suture the large intestine.

Later on the wounded intestine was sutured to the anterior abdominal wall thus making an artificial anus with no attempt at repair of the wound of the intestine at the time of operation or even afterward. Such was the method of Palfyn who carried a loop of thread through the edges of the intestinal wound and fastened the ends externally. Peyronie passed a double thread around the bowel. Others used a single stitch with the same idea in view.

Reybard of Paris in 1827 used a slightly different method to cause adhesions to form between the peritoneal coat of the intestine and the abdominal wall. He used a small strip of wood with rounded edges in the middle of which two holes were made about a line apart. A loop of thread was carried through these holes and the piece of wood inserted in the intestine. Each end of the

*Read at the Michigan State Medical Society at Kalamazoo, Sept. 15, 16, 1909.

thread was then carried on a needle from within out through the edges of the intestinal wound. The sutures were then threaded with curved needles and carried through the abdominal wall from within outward and tied externally. Reybard cut the thread two days after the operation and the strip of wood fell into the intestine. The mortality following this operation was high and those who recovered developed fecal fistula.

The first successful intestinal anastomosis was done by Ramdohr in 1780 by invagination and suturing the bowel to the abdominal wall. Travers in 1812 was the first to discover that an intestinal anastomosis could be successfully performed without suturing the bowel to the abdominal wall.

Lembert of Paris in 1825 and 1826 did the pioneer work in modern intestinal suturing. As his method is universally misunderstood and misquoted in all surgical text-books and journals I take the liberty of quoting freely from one of his original articles as read before the Surgical Section of the Royal Academy of Medicine of Paris January 26, 1826. Lembert says that, "He employs as many needles as there are points of suture to be passed. The needle penetrates into the cavity of the intestine about two lines from the edge of the wound or its point glides between the muscular and mucous coats according to the thickness of the intestine, then the point of the needle is made to come out again about one line from the edge of the wound whence it is carried across the wound and made to penetrate the bowel wall about one line from the edge of the wound and comes out about two lines distant. When the suture is tied the serous membranes are brought together and the free edges of the wound are inverted into the cavity of the intestine and form a projection into it of greater or less extent. The sutures cut through little by little the small portion of the intestine which they include and fall into the intestine."

Thus Lembert's original idea was to get union of serous surfaces by means of a suture which passed through all the coats of the intestine. It was only by accident that some of the sutures failed to penetrate the mucous coat. Consequently the sutures always disappeared into the lumen of the bowel. Even after the third day following the operation Lembert could find no sutures at the site of the operation. The suture which is described at the present time as Lembert's is really a sero-muscular stitch which does not penetrate the mucous coat of the intestine and must be differentiated from Lembert's original suture if we wish to be historically accurate. Furthermore a sero-muscular stitch will not disappear into the lumen of the bowel but will remain indefinitely in the intestinal wall as I have frequently demonstrated in specimens of end to end anastomoses which have been performed on dogs in the Surgical Laboratory of the University of Michigan. It is only when this suture becomes infected by penetrating the mucous coat that it disappears into the lumen of the bowel. Consequently the sero-muscular stitch should not be described as Lembert's as it is in all the surgical literature of the present time.

On account of the danger of retraction of the mucous membrane with the attending fecal extravasation and possible obstruction of the bowel when the mucous membrane is not sutured, two rows of stitches are generally employed: one to include the mucous membrane, and the second, a row of sero-muscular stitches to maintain the union until repair is complete. The mortality following the operation of intestinal resection has

been considerably reduced in recent years by a gradual improvement in technique. Mayo reports a mortality of twelve per cent in one hundred cases of resection of the large intestine, with lateral anastomosis. In end to end anastomosis the mortality is considerably higher, being about forty per cent.

The Connell suture is an attempt to overcome some of the difficulties which attend the method by two rows of stitches. It passes through all the coats of the intestine with the knots tied on the inside instead of on the outside, as in the original Lembert suture. It has been experimentally proved that the drainage of infective material is toward the knot and, therefore, in this case toward the lumen of the intestine where it can be eliminated without causing any peritonitis. On the contrary, if any of the sero-muscular stitches which are applied in an enterorrhaphy happen to penetrate the mucous membrane the infective material will drain toward the peritoneum and cause a localized peritonitis. It is the experience of most surgeons, however, that the accidental passage of a few sero-muscular stitches into the lumen of the bowel is usually not followed by the death of the patient if the general condition is good. There appears to be more security in a stitch which penetrates all the coats of the intestine than in the sero-muscular which includes only a part of the intestinal wall. There is also less danger of obstruction where a single row of stitches is used because there is less invagination of the intestinal wall. In operations perfo.med on dogs by junior medical students in the Surgical Laboratory of the University of Michigan there were as many recoveries after using the Connell suture for end to end anastomosis of the intestine as with two rows of stitches.

None of these methods, however, can be considered as aseptic, as the danger of infection from the lumen of the bowel is constantly present. During the last five years various attempts have been made to devise a method of anastomosing the intestine without opening the lumen, thus avoiding contamination of the field of operation with the infective bacteria which may be present in the intestine. J. Schnitzler of Vienna has recently criticized some of these methods on the ground that the present methods of performing resections of the stomach and intestine are followed by a very small mortality and that this would not be materially reduced by avoiding infection from the lumen. It seems rather curious that a prominent surgeon should announce that no further improvement is possible in operations upon the intestine.

Schnitzler maintains that the ordinary bacteria present in the stomach and intestines are not pus-producing germs and could not produce peritonitis. If this were true it would hardly be necessary to take any precautions to avoid infection from the lumen. We know, however, that the less opportunity there is for infection from the lumen, the greater the proportion of recoveries. Injuries of the stomach and intestine which are repaired in six to twelve hours generally result in recovery because the infection is either not virulent or sufficient time has not elapsed for peritonitis to develop. It is true, as Schnitzler says, that there are very few bacteria normally present in the stomach and upper part of the small intestine because of the rapidity of peristalsis. In the lower two feet of the ileum and at the ileo-cecal valve the germs become more numerous and virulent. There are some pus-producing germs always present in the intestinal tract, according to bacteriologists, and the colon germ which is con-

stantly present in the large intestine may under certain conditions produce pus, as in acute appendicitis. The danger of infection from the lumen, therefore, is always present. Cancer and tuberculosis may also be disseminated in this way. Another factor of importance is that injury of the mesentery may result in interference with the blood supply in end to end anastomosis and consequent gaping of the wound may follow from necrosis. In lateral anastomosis there is greater possibility of infection from the lumen but there is less interference with the blood supply than in end to end anastomosis which accounts for the higher mortality in the latter.

The failure to include the mucous membrane in the suture as proposed in some of the more recent methods of intestinal anastomosis has been thought by some to be the possible cause of subsequent gastric or intestinal hemorrhage. On the contrary, compression of the intestine with an enterotribe and resecting it with the actual cautery is generally believed to be successful in preventing hemorrhage because it closes the mouths of the blood vessels. It is also urged by Schnitzler that stenosis may result from lack of suture of the mucous membrane. This was demonstrated in one of my experiments. It can be prevented, however, by making oblique incisions through the intestinal wall. Madelung in 1881 showed that the oblique incisions provide a better blood supply at the free edges and allow for the excess of inturned edge at the mesenteric border.

Rostowzew in 1906 was the first to propose a method of performing an aseptic anastomosis of the intestines or stomach. He devised quite a complicated set of instruments for this purpose. By means of an enterotribe he compresses the intestine at the proposed point of resection, then uses a strong clamp to compress the intestine at a short distance from here. The blades of these instruments are then heated with the actual cautery sufficiently to sear the edges of the intestine together, leaving depressions and elevations upon the intestinal wall arising from the projections and grooves on the blades of the instruments. These clamps are so constructed that the blades can be separated from the remainder and left in position upon the intestine. Next he cuts through the portion of intestine included between the two clamps with the actual cautery, thus searing the edges of the severed intestine and preventing the escape of the contents. The incision is then prolonged into the mesentery after ligating the vessels. The same procedure is carried out at the other end of the proposed resection. Finally the edges of the intestine to be joined are brought together and sutured by means of a series of interrupted seromuscular stitches passed over the clamps which are then carefully removed and the edges of the intestine remain seared together. The lumen is restored by pulling the sutures, which are oppositely placed, apart after grasping each group of three at one time with a pair of hemostatic forceps. These stitches are finally tied and the operation completed. This method can not be considered as practicable on account of the complicated set of instruments which is required. Moszkowicz has modified the instruments of Rostowzew but the principle is identical.

Parker and Kerr of Johns Hopkins University have devised a very simple method of aseptic anastomosis of the intestine which can be carried out with a few needles and thread and a few ordinary intestinal clamps. The intestine at the proposed point of resection is compressed by two narrow bladed crushing forceps at first placed in actual

contact and then slightly separated. By this process the walls of the intestine are glued together somewhat. Then the portion included between the clamps is divided by the actual cautery or knife. The mesenteric vessels which supply the portion of intestine to be resected are ligated and the intestine at the opposite end of the proposed resection is also divided between two clamps in the same way. The authors then apply their so-called basting stitch to each end of the divided intestine. This stitch is a continuous sero-muscular one applied loosely over the clamp. The ends of this suture are not tied because they must be removed later. Next the clamp is carefully removed and by pulling on both ends of the basting stitch one can invaginate the end of the intestine perfectly, thus preventing the escape of any of the contents of the bowel. Then a series of interrupted sero-muscular stitches is used for joining the divided ends of the intestine. After these are tied the basting stitches are removed by pulling on one end of each.

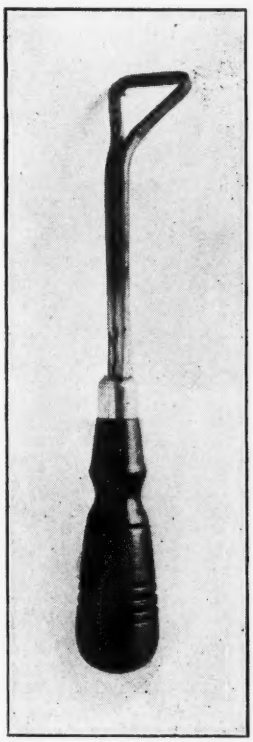

FIG. 1

At first the tendency is to invaginate too much of the bowel wall, especially in the case of resection of the small intestine. My first two experiments with this method were failures on this account, resulting in the death of the dogs operated upon from failure of the sutures to hold securely under so great a tension. The result was perforation of the bowel at the point of anastomosis. This was overcome in later experiments by taking the sutures nearer the edges so that no more dogs died on this account. Another complication in one experiment was retraction of the mucous membrane with accumulation of the contents of the bowel at the point of suture, resulting in a stricture which caused the death of the animal about two months after the operation. Upon section of the abdo-

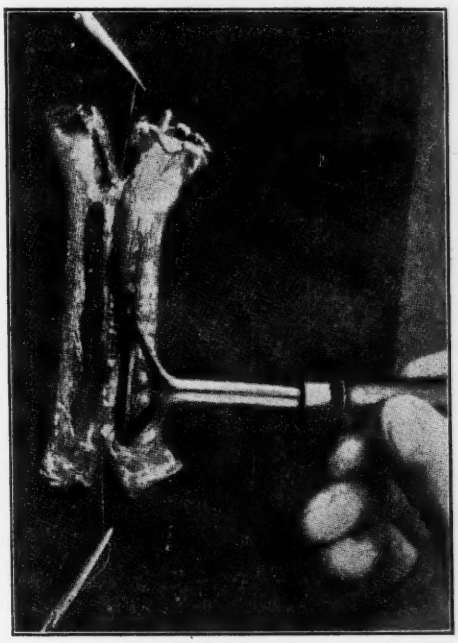

FIG. 2 E. Capek

men after death the intestine immediately above the anastomosis was found to be much dilated and filled with a mass of hair firmly matted together. A flap of mucous membrane had not united with the remainder. Microscopical examination of this area showed it to be a chronic ulcer or wound scar tissue with active inflammation and marked glandular hyperplasia. This complication was afterward always avoided by using the oblique incisions of Madelung through the bowel wall. This incision is made at an angle of forty-five degrees to the axis of the intestine and gives a lumen double in area to that of the incised bowel.

In a case requiring a lateral anastomosis the method of Parker and Kerr is varied somewhat in order to be sure of grasping the mucous membrane in the clamp. Three needles are plunged into the lumen of the bowel at its free border and brought out again about one quarter of an inch from the point of entrance. They are placed about one half an inch apart, parallel and at right angles to the bowel axis and plane of the mesentery. The clamps are then placed beneath these needles so as to grasp the intestinal wall between the points of entrance and exit of the needles and the operation is completed the same as in end to end anastomosis. This operation can not be regarded as aseptic as the lumen of the bowel is penetrated and infection may be carried to the peritoneum in this way.

Another method of aseptic intestinal resection is that of F. B. Walker who uses a purse string suture to prevent the escape of the contents of the intestine during the operation. These purse string sutures are tied with a slip-knot so that they may be readily removed after the anastomosis is completed. The section of the intestine is made with the actual cautery which sears the edges together, thus preventing the escape of the contents of the bowel. This method seems to require the invagination of more tissue than that of Parker and Kerr and is, therefore, more liable to be followed

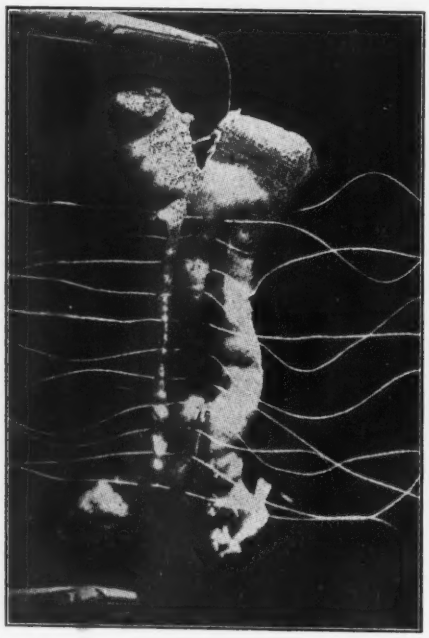

FIG. 3 E. Capek

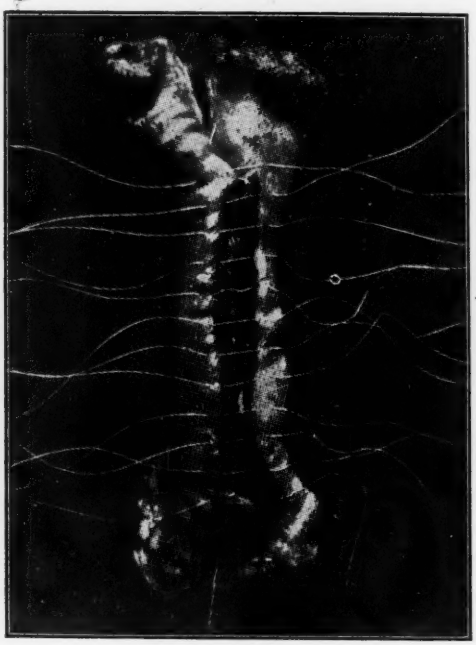

FIG. 4 E. Capek

by obstruction from stricture of the bowel. It cannot be used for an aseptic lateral anastomosis because an opening has to be made into the lumen of the bowel.

E. Capek of Bohemia has proposed an operation which is very simple and can be applied both for an aseptic lateral anastomosis and a gastroenterostomy. The communication is not established at the time of operation but in about twenty-four hours. The loops of intestine which it is necessary to anastomose are joined with a continuous sero-muscular stitch applied near the mesenteric border. About ten millimeters from this suture an incision is made of the length of the proposed anastomotic opening and within the limits of the length of the suture. This incision is made only through the serous membrane and muscular coats exposing the mucosa. The length of the incision varies with the portion of the intestinal tract involved. The field of operation must be kept free of blood by ligating the bleeding vessels and applying a hot sponge to control the capillary ooze so as to avoid cutting the mucous membrane.

The edges of the incision are then spread about two to three millimeters apart and the submucosa and mucosa cauterized with the author's cautery. (See Figure 1.) This is a triangular shaped instrument made of heavy steel wire about three and eight-tenths millimeters in diameter. The length of the cautery is three to five centimeters. The hemorrhage must be stopped before the cautery is applied or the blood will cool off the instrument so rapidly that the cauterization will be incomplete and the communication will be established much later than usual or remain incomplete with the formation of a septum. It is necessary to have several of these cauteries heated at one time in order to perform the operation without any delays.

The cautery is applied at a dull red heat with moderate pressure until the smoke ceases to arise and one must not remove it to apply it again but it should be applied continuously until the cauterization is complete and it must not be allowed to burn into the lumen of the bowel. The length of time for the application of the cautery is twenty to twenty-five seconds. When the area is properly cauterized it looks like thin parchment. In the case of an intestine with very thin walls the cautery is applied directly to the serosa and less pressure is exerted than on a normal intestinal wall or it will burn through into the lumen of the bowel. (See Fig. 2.)

FIG. 5 C. Georg, Jr.

The cauterized areas are brought into perfect apposition by means of two rows

of interrupted sero-muscular stitches, one placed internal to them and the other external so that the corresponding edges are accurately apposed. Finally the whole wound is covered in with a continuous sero-muscular stitch. (See Figs. 3 and 4.)

I have done five lateral anastomoses and two gastro-enterostomies by this method with success. The necrosis which is set up as a result of the cauterization of the mucous membrane causes it to yield within twenty-four hours, thus establishing the communication. The walls of the opening are generally smooth and there are no necrotic masses. (See Fig. 5.) It requires some experience with the operation upon animals to be able to recognize the proper depth of cauterization. There is no doubt that the method can be readily applied to similar operations upon man.

The results of these experiments which have extended over a period of two years, seem to indicate that the method of Parker and Kerr is the most practical for end to end anastomosis and that of Capek for lateral anastomosis and gastro-enterostomy.

BIBLIOGRAPHY

Madelung, O.—Verhandl. der Deutsch. Gesellsch. für Chir., Berlin, 1881 X, pt. 2, pp. 414-464; Archiv für Klin. Chir., Berlin, 1881-2, XXVII., pp. 277-326.

Dennis, Frederick S.—System of Surgery Vol. IV pp. 312-321.

Lembert, A.—Memeire Sur L' Enterorraphie avec la Description D' Un Procédé Nouveau Pour Pratiquer Cette Operation Chirurgicale. Du le 26 Janvier à l' Academie Royale de médécine—Section de Chirurgie. —Répertoire général D' Anatomie et de Physiologie Pathologiques et de Clinique Chirurgicale. Tome Second. Premiere Partie—Paris 1826 pp. 100-107.

Bernard, Cl. et Huette, Ch.—Iconographie Précise d' Operativ Médécin—Paris 1846 pp. 253-260.

Rostowzew, M. Iw.—Aseptische Darmnaht. Archiv für Klin. Chirurgie Bd. 82 Heft 2. 1906. pp. 462-485.

Moszkowicz, Ludwig—Archiv für Klin. Chirurgie.—Band 86 Teil 4 pp. 887-906 and Wiener Klin. Wochenschrift November 12, 1908 Vol. XXI No. 46 pp. 1593-1596.

Parker, E. M. and Kerr, H. H.—Intestinal anastomosis without open incisions by means of Basting Stitches. Johns Hopkins Bulletin May 1908.

Walker, F. B.—Intestinal Anastomosis; Presentation of a New, Simple and Aseptic Method. The Journal of the American Medical Association August 15, 1908 pp. 546-548.

Capek, E.—Eine Weitere Modification der Technik der Cauterium—Darm Anastomosen resp. Gastro-enterostomien.—Archiv für Klin. Chirurgie Band 86 Heft 2 pp. 509-530.

Schnitzler, J.—Uber die Sogenannte Aseptische Rostowzewsche Darmnaht. Wiener Klin. Wochenschrift, 1908 Vol. 21 pp. 1672-1673.

Do not forget that the next Annual Meeting of the Michigan State Medical Society will be held in Bay City, September 28 and 29, 1910. Program on pages iv and 460.

PRACTICAL CONSIDERATIONS OF CROSSED EYE AND OTHER MUSCULAR EYE TROUBLES*

F. J. BERNSTEIN, M. D.
Kalamazoo, Michigan

Crossed eyes in any individual make such a deformity, ever present in its hideous ugliness that the hapless victim is the constant butt of his thoughtless companions and through this becomes more sensitive to ridicule; to the end that he feels his handicap and becomes less assertive and gradually assumes a position below his natural standard. This lowered stand is not alone due to these extrinsic forces, but we know that in almost everyone of these individuals, the sight of the one eye is, to all intents and purposes, lost, so that that person goes through life seeing but one half his share.

In the case of muscular eye troubles of less marked degree, i. e., where no deformity exists, while they do not cause actual deformity of the face, yet through the constant wear and drain upon nervous energy have an even farther effect upon the general health and vigor leading even to insanity. It is the knowledge of these factors, more or less disregarded by the family physician which seems to me quite worth while bringing this subject to your attention. If I can impress upon only a small fraction of you these truths of modern ophthalmology and that the conscientious oculist is entitled to a support, too often thoughtlessly given to the corner spectacle dealer, I shall feel this has filled its purpose. For the sketchy character of this paper, I must apologize to the specialist, as I feel that the general practitioner wants to know the important new things in as concise a manner as possible. Firstly, the term crossed eye, internal or external strabismus or squint is giving way to the more exact one of heterotropia and according to its internal, external, upward or downward tendency or preponderance to esotropia, exotropia, hypertropia or hypotropia. Esotropia is usually due to an error in refraction, usually hypermetropia, which causes an undue amount of nerve impulse to be sent the apparatus controlling accommodation — as the impulse to accommodation and convergence are most intimately associated, the force calling for the one function is reflected by the other so that excessive accommodation calls forth excessive convergence stimulus and in the end a permanent internal fixation occurs. This condition may affect both eyes alternately or only one eye. When the latter, it is usually found that this eye has the greater degree of refractive defect. When after a long time, the one eye is constantly deviated to one side or the other, another set of conditions arises—sight is practically lost in that eye, the muscle turning the eye in that direction often becomes unduly strong while the opposing muscle becomes attenuated and weakened. In this latter course, curative treatment—in that we mean restoration of binocular vision—is out of the question and only a cosmetic effect can be hoped for. Here we must seek to elongate and weaken, relatively, the stronger muscle by a tenotomy

*Read before the Michigan State Medical Society, at Kalamazoo, Sept. 15, 16, 1909.

and strengthen and shorten the relatively weaker muscle by an advancement operation. In the purely refractive esotropias curative measures should be carried out, this means that by attention to the refraction—very early in life—after the most thoroughgoing dilatation of the pupil and paralysis of accommodation by days of atropin, properly fitted glasses and training of the weaker eye will not only cure the deformity but preserve the full function of both eyes. This is not new. I have followed this plan since 1892 with scores of good results. In these cases, I am firmly convinced that dictum laid down by Fuchs in the early 80's is correct, that no such child should be operated upon till after the tenth year. From this there is hardly any variance.

Next in frequency, come the paralytic forms either central or peripheral. Among the former may be mentioned those due to meningitis, to cerebellar abscess or abscess in other parts of the cerebrum.

One of the most important of which is paralysis of the third nerve in part or toto from extension of neglected ear suppurations, a stabile pupil clinching the diagnosis. The treatment is obvious. Paralysis of the ocular muscles may also be due to tubercular meningitis, aneurism, paretic dementia, bulbar paralysis, or multiple sclerosis. Peripheral paralyses may be due to syphilis, rheumatism, diphtheria, diabetes, poisons, or injuries. Finally, quoting De Schweinitz it may be due to violent migraine.

Third—According to Dr. Lucien Howe, "Our ignorance of paralyses is as great as the subject is important. In spite of the multitude of these cases, few have come to the postmortem table showing even the gross pathological changes and only a few of these latter have been subjected to minute miscroscopic examination. Therefore, we must concern ourselves mainly with the methods of diagnosis."

The prognosis, naturally depends upon an infinite variety of factors:—the pathological condition which gives rise originally to the paralysis is of prime importance: though no matter what that may be, much depends upon the age and the recuperative powers of the individual and the length of time since the symptoms first appeared.

Howe, quoting Liebrich, says of 320 cases, 21 cases in which the cause was doubtful, 9 recovered in from 8 days to one and one-half years, four improved in from 12 days to two months, three recovered with paralysis of the pupils, four were unimproved two years later, one not improved twelve years later.

Six cases of syphilitic origin, 2 were well in four weeks and one improved in three weeks, one in four months, one in six days and one not influenced in five months.

Twenty-five tabetic cases, eleven improved in eight days to five months; five some improvement in from one to four months; 9 in intervals ranging from two months to eight years.

Seven cases with other paralytic symptoms, 3 recovered in from eleven days to five months, others unimproved after term ranging from seven months to one and one-half years.

It may be entirely anatomical; due to a muscle too long for the given orbit or the perfectly formed muscle may be placed faultily, too far forward or back of its proper insertion place.

Fourth.—It may be due to an orbital abscess or growth or what is very frequent—a suppuration of an adjacent frontal, ethmoidal, sphenoidal, or maxillary abscess.

Fifth.—Retinal changes may cause any form of heterotropia. Finally a deviation inward or outward ofttimes is caused by a

defect in either the *superior* rectus or *inferior* rectus. I have several cases on my records of cures brought about by operation, not on the muscle apparently at fault, but thorough examination showing quite another muscle at fault. I am sure most ophthalmologists can duplicate these records.

What applies to the esotropias or internal deviations applies likewise to the other deviations with the exception of the cause and treatment of esotropia due to hypermetropia.

The treatment of heterotropias, when not indicated by the foregoing causes and, as will be seen, a great number call for other than surgical proceedures upon the muscles apparently at fault, calls for the best and most skillful diagnostic measures at our command.

When it has been determined that operation alone can restore the muscle to function, which operation should be selected? I shall not weary you with the pros and cons for simply tenotomy or advancement. Suffice it to say both operations have their proper field of usefulness, their indications and contraindications which practically every student of ophthalmology is agreed upon. There are still other cases on which opinion has not yet crystalized as to whether in the given case we should do the one or the other operation.

The points I wish to emphasize are that the consideration or advice as to the proper course to pursue are only to be given after the most careful elimination and study of each case. In my early days I have seen dozens of cases brought into the dispensary and with no further examination than inspection, placed upon the operation table. Many of these cases, in a few years had a beautiful exotropia and a wall-eye substituted for a cock-eye and of course, no practical vision in that eye. I also must plead against advising patients thus afflicted, to "let it alone;" that "it will cure itself." I feel like apologizing for referring to this antedeluvian advice, yet only a few days ago I had a victim of this absurdity.

There is another very large class of muscular eye troubles, in which we have no, or hardly any, manifest aberration from the normal parallelism or concomitance, these are the so-called insufficiencies or muscular imbalance. The very great importance of these troubles can not be overestimated in their relation to reflex neuroses and even bodily deformities. We owe a great deal to the researches of Dr. George Stevens for an accurate nomenclature and classification of these subtle changes and while he went very far from the mark in his almost wholesale advocacy of so-called partial tenotomy of the offending eye muscle, still a great indebtedness is due to his work. It was he who gave us the names esophoria for a latent paresis or insufficiency of the external rotating muscles whereby a homonymous diplopia is produced. Exophoria as affecting the internal muscles in which crossed or heteronymous diplopia; hyperphoria affecting those which turn the eye upward and hypophoria for the downward rotating muscles. To Dr. Maddox of Edinburgh we are indebted for a simple means of detecting the variety of deflection. A clear glass cylinder or rod (later changed to a series of rods) is placed before one eye and causes that eye—when the patient is caused to look at a small bright light with both eyes open—to see a bar of light while with the uncovered eye he sees the natural light. According to the relative position of these two images we determine the nature and character of the defect.

The appreciation and correction of these troubles have done much to bring back to health and active work many who have

been barred from daily work. Unfortunately many quacks have seized the occurrence of imbalance and without adequate knowledge in the first place, and with criminal recklessness have forced numerous patients to submit to unnecessary eye operations simply to gather a fee.

Before entering upon a consideration of the various ills caused reflexly by muscular anomalies it is well for us to know that a large number, possibly the largest majority of people, have some imbalance. In by far the largest number of these, the amount and degree is a negligible one and that there is no fixed rule as to what causes trouble and what can be neglected. Each case, as in every other department of medicine is a law unto itself. What one patient can carry with absolute indifference would set another wild. We must also remember that a considerable portion of these imbalances are temporary or rather transitory and the *result* of systemic troubles rather than the cause of them.

Without attempting to make a complete list we know the following diseased conditions to bring them about, anemia, autointoxication from renal disease, from indigestion, from improper pulmonary or cardiac functioning; infections; pregnancy; gout; rheumatism; lack of outdoor life and exercise are probably the more common.

The most common symptom of eye muscle imbalance is asthenopia—difficult or painful sensation especially marked upon attempts at near work. This pain may be referred to the deeper parts of the orbit or to the frontal or occipital region, or to the spine, this latter is the strong point of the osteopathic quack. Patients with imbalance, upon close observation are found to tilt the head to one side or the other, usually favoring the side, in the direction of which the offending muscle should normally act, this tilting may go so far as to cause even torticollis or scoliosis, indeed many eminent oculists, prominent among whom is Dr. George Gould of Philadelphia, insist that every such case should be thoroughly examined for this defect and are likewise confident that its correction will cure a very large percentage. I may add here that Dr. Gould is a persistent advocate of non-surgical means to remedy them and his very extensive experience certainly is worthy of the highest credence. Certainly no man is more careful to correct every possible error of refraction nor none more worthy of confidence in their statements.

Dr. Leartus Conner has shown that heterophoria may cause acute rhinitis, loss of smell and tinnitus aurium and in this is supported by many.

Dr. De Schweinitz and many others contend that gastric troubles, tachycardia, flatulent and other forms of dyspepsia, indigestion, night terrors in children, may have a like origin. Although gastrologists may think this far-fetched, it is an uncontrovertible fact that most cases of car sickness owe their origin to muscular asthenopia, which upon correction no longer exists, thus plainly showing the relationship. Furthermore, Dr. Howe reports a case of a woman in whom a gastric fistula enabled him to make accurate tests of the effect upon the gastric contents by artificially producing various muscle anomalies by lenses. All are familiar with the nausea produced by swinging. This is due to the rapid change of images and attempt to adjust position of the eyes to them. There is not a careful oculist who can not record cure of gastric disturbances after attention to asthenopia.

General bodily fatigue after prolonged attempts to read are common to everyone. It is therefore not surprising when every at-

tempt to read calls forth excessive efforts of the external and intraocular muscles that the patients who suffer with general lassitude are often cured when refraction and muscles are put in normal conditions.

From general fatigue to neurasthenia is not a far cry, it is therefore not surprising that this symptom complex often owes its origin to disorders of the ocular muscles and the literature is full of reported cures of this and its next door neighbor, hysteria—though almost anything new even to Eddyism and Lourdes makes them happy for a time. Chorea, the "epilepsies" and many other neuroses are likewise often benefited or cured after correction of muscular or ocular defects.

We are not very hopeful nor can we make any extravagant claims as to the relation of these last mentioned diseases (epileptoid disorders), especially not, since the commission appointed by the New York Ophthalmological and Neurological societies, and the examination led by Gould and Bennet at the Craig Colony were fruitful of results in such a small percentage of cases. And these men are among the most careful and painstaking. I mention this class of cases and the almost uniform failure especially, as it figures largely among the quacks as a drawing card to separate the poor dupe from his cash.

Finally, a word or two as to treatment. It is important for you to know that in the vast majority of cases it is not surgical. Attention to refraction, to some underlying cause bringing about lack of muscular tonicity, the use of prisms more or less permanent as the case may require, exercise with the many orthopedic measures such as prisms, stereoscope, etc., are usually satisfactory and permanently relieve the troubles.

Finally in a very small percentage of cases, after the most careful and painstaking measurements and observation extending over rather long periods, some form of advancement or tucking operation or tenotomy according to the exigencies of the case, shows the necessity for strengthening a weak muscle or weakening a relatively too strong muscle may exist.

CANCER OF THE PENIS AND EXTIRPATION OF THE ORGAN WITH PERINEAL TRANSPLANTATION OF THE URETHRA, AND REPORT OF A CASE*

SCHUYLER C. GRAVES, M. D.
Grand Rapids, Michigan

Malignant growths affecting the penis are, as would naturally be supposed, sarcoma and carcinoma, the latter being almost always of the epitheliomatous type. These neoplasms as a rule are primary in character and very seldom secondary.

Referring to carcinoma in particular, it can be said that where it affects other organs it does so in advanced life, but cancer of the penis has been observed in a youth of seventeen. It is unusual before forty, and most common between fifty and seventy.

All authors and observers unite in the

*Read before the Kent County Medical Society, October 13, 1909, with exhibition of specimen and patient.

dictum that the smegmous filth associated with phimosis, constantly irritating the glans, is a pronounced etiological factor, as are also the presence of warty growths, trauma, scars (such as precede cancer of the cervix uteri), and benign ulcers long existent.

According to Bergman Kreitner distinguishes three types of penile cancer.

1. The papillary cauliflower variety.

2. The carcinomatous ulcer variety, which exists in the case discussed and presented this evening, and

3. The non-papillary cancer.

The first may grow to large proportions, and resemble the well-known cauliflower of the markets. The second is of the ulcerative type, as its name indicates, and presents indurations and excavations. The third, very rare, resembles scirrhus.

Cancer of the penis may remain penile in character with, of course, later disseminations and metastases or it may spread to the adjacent organs, chiefly the bladder, prostate, rectum, scrotum and testicles.

As with cancer affecting other organs, the disease undergoes metastatic expansion by way of the lymph channels, although metastases other than those of the inguinal glands are rare; but it may extend directly through the vascular (erectile) tissue of the corpora cavernosa.

Chondromata, and tuberculous, syphilitic and phagedemic ulcers may lead one into diagnostic fogs; but the amount or character of the induration, the use of the microscope and the susceptibility to appropriate medication or treatment will quite generally clear the clouds of doubt away and leave the nature of the disease exposed.

As to prognosis the outlook especially in the first two varieties may not be so very bad. Taken a case where the growth has fastened itself upon a relatively young man, is extending rapidly and is already associated with advanced glandular involvement the prospect could not be worse; but in a case where the disease has selected an elderly gentleman, is early in its course, is extending slowly, and is not associated with glandular complications, the chance of a prolonged life without recurrence or of even a radical cure is not a forlorn one.

When we enter into the discussion of the treatment it is surprising to note that the operation of partial amputation seems to be the popular or perhaps I should say the usual procedure recommended.

It strikes me, however, that the only justification for such a course is that of ridding the patient of an offensive mass without having in view the cure of the disease. Of course the only rational thing to do, the matter of relative operative risk to the subject being practically the same, is to remove all one can of the organ, especially if the case be this side of hopeless.

The operation devised by Pearce Gould of the Middlesex Hospital, London, and whom I have had the pleasure of seeing operate there, is the best. It is described by Peckham in his recent work on operative surgery, but no mention is made of Gould in connection with it.

It is called a total excision; but it is not total inasmuch as it leaves most of the bulb of the corpus spongiosum, and this, by the way, is the only weak point about the operation; for cancer almost always involves the glans, and the glans is the distal expansion of the corpus spongiosum.

Briefly the operation is done after the following fashion: Inasmuch as the passage of a steel sound per meatum is generally impossible *ab initia*, oval flaps at the base of the penis are made, the same dissected back and the urethra opened at or slightly above the peno-scrotal junction. The sound

is then passed *per vias naturalis* from the artificial gateway and held in position by an assistant.

The aid of the sound in differentiating later between the corpus spongiosum and the corpora cavernosa is quite important. Splitting the scrotum along the raphé, the testicles, each in its individual compartment, are thrust aside until the post-scrotal muscular tissue comes into view. The incision is deepened through this area exposing the corpus spongiosum and then extended into the perineum. The former at this juncture is dissected free from the two overlying corpora cavernosa. This dissection is somewhat difficult at first because of the intimate relations obtaining; but is assisted materially by the presence of the sound and becomes much easier the deeper the dissection proceeds.

After complete freeing of the corpus spongiosum from its relations superiorly it is allowed to hang from the perineal portion of the wound.

The crura are then detached from the rami ischiorum, the suspensory ligament severed, the dorsalis penis artery tied, some freely bleeding veins of the cavernous plexus secured and all but the bulb and a distal portion of the corpus spongiosum thus separated and delivered. Section of the bulb flush with the perineal integument and securing there the urethral mucous membrane, with the suturing of the divided scrotum and the suprapubic wound complete the operation.

The wound may be drained or not; preferably drained I think, by strands of catgut emerging just above the new perineal meatus.

Report of Illustrative Case with Patient

L. G., age 61, Ionia, Mich.—Noticed trouble for six months prior to operation, which was done at the U. B. A. Hospital, Grand Rapids, August 18, 1909.

The disease began as a little pimple on the surface of the glans and soon became ulcerous. It was treated almost the entire six months as a benign affair. Finally a few days before the writer saw the case the patient fell into the hands of a physician who recognized the gravity of the situation and referred the patient to your essayist. The penis exhibited an indurated, excavated, ulcerous, œdematous and foul smelling state of affairs involving perhaps one half of the organ.

Common humanity demanded the removal of the offensive mass; but the absence of glandular involvement and the patient's age led me to give this good man the benefit of the doubt and to do what I could to save him. Let us trust that our effort will meet with success.

Aug. 10, 1910.—I saw this patient about a week ago, when there was no evidence of recurrence.—S. C. Graves.

A CASE OF HOLOACARDIUS ACEPHALOUS

ALFORD E. BUDDE, M. D.
Norway, Michigan

A report of a very interesting case of holoacardius acephalus is herewith given which occurred in my practice last September. The specimen after having been photographed was sent to Professor Zeit of Chicago, and pathological report in full was made by Doctor Harry Jackson, of the Northwestern University Medical School, which is also given herewith.

CLINICAL HISTORY:

Name: Mary J.—City; age 19 years; color, white; Canadian, French, born in Canada; married (by illegitimate means, however); occupation, barmaid; para-two.

Previous diseases: None except those of childhood, has had syphilis and gonorrhea, the latter at the present time. No signs of rickets. Walked first at age of 14 months. Menstruation first at 12 years; regular, lasting 3 to 5 days, and painless.

Family history: Father died of tuberculosis pulmonis; mother living and has syphilis; two sisters living show signs of syphilis.

Personal history: Patient has had syphilis, probably hereditary; has had gonorrhea with several attacks; at the confinement profuse gonorrheal discharge. First pregnancy illegitimate; labor of short duration and normal character. Recovery uneventful. Child though normal at birth lived but two months; cause of death unknown. This was two years ago. Gives rather indefinite history of a miscarriage a year ago. Does not remember last menstruation before confinement. Her health during pregnancy was good. Conception took place about nine months before labor (under illegitimate circumstances).

Labor: Was called at 9 P. M. Sept. 7th, 1909, labor having been in progress for three hours.

External examination: Showed small round distinctly separate immovable tumor on the right side of the abdomen, apparently a fibroid (?). Was somewhat nodular, irregular and firm. Baby was normally situated, and distinctly separate from the tumor. Heart tones to the left of the median line, below the navel, and of normal rate. Uterine contractions were strong, and came every two to three minutes.

Internal examination: Cervix was almost effaced and os nearly dilated. Membranes not ruptured. Normal amount of liquor amnii. Presentation was normal. Baby was somewhat smaller than normal and was distinctly separate from the so-called tumor at the upper right quadrant of abdomen.

Delivery: Was normal in all respects; baby normal and mature though weighed about 3½ pounds.

Within five minutes after delivery of the baby, to my surprise, so-called tumor was borne, enclosed in a distinctly separate amniotic sac, but having an attachment to the placenta which immediately followed. However, the specimen (i. e. diagnosed tumor before delivery) proved to be a monstrosity of considerable interest. Evidently a twin pregnancy had been begun, and the normal baby grew to maturity, while the other fetus was impaired probably by pressure or otherwise.

Pathological Report: Harry Jackson, M.D., *Instructor in Pathology, Northwestern University Medical School, Chicago, Ill.*

EXAMINATION OF SPECIMEN:

Fetus (Figs. 1 and 2).—The mal-formed fetus measures 16.5 cm. in length and 7½ cm. in width and weighs 350 grams. It shows a body and two legs; the head and arms being absent. The skin is discolored and macerated. The legs are of unequal length, and there are no toes. Two cm. from the anterior extremity of the body is a hernial sac occupying the site of the umbilicus. This sac is 3½ cm. in diameter and contains several coils of intestine. To it the umbilical cord is attached. Two cm. from the posterior extremity of the body on the ventral surface is a small penis-like structure. There is no anal opening. There is a small, warty nodule one cm. to the left of the umbilicus.

FIG. 1

Radiogram (Fig. 3).—The radiogram shows a fairly well-developed skeleton. There are eight ribs on each side of the vertebral column of fourteen vertebræ. The scapulæ are present, but there are no clavicles or bones of the arms or skull. Two ilia and two ischia are fairly well developed. Two fibulæ are seen of normal length; one tibia only is present, that of the right leg. What appears to be the calcaneus and os calcis and metatarsal bones are present in each foot. There are no phalanges visible.

A *sagital section* shows the skin and subcutaneous tissue 1½ cm. thick and edematous. There are several small cysts present in this tissue, and one large cyst, 3x1½ cm., is seen near the anterior extremity of and dorsal to the vertebral column. This contained a clear fluid. Beneath the subcutaneous tissue is a layer of fatty and muscular tissue varying from ½ to 1 cm. in thickness. A soft myxomatous tissue fills in the space between this layer and the bony structures, except a small cavity connected with hernial protrusion, and extending from it downward into the pelvis. This contains a few coils of large intestine which end blindly in the pelvis. No other internal organs can be recognized.

Sections taken from various parts of the body show, microscopically, striped muscle,

fat, edematous connective tissue, epithelium and thin-walled intestine containing desquamated epithelial cells and débris. No nervous tissue was found.

The *placenta* measures 12½ cm. x 11½ cm. and weighs 365 gm. There are two amnions, one being three times as large as the other. There are two separate cords: one to the normal fetus measures 36 cm. x 1 cm. and is attached 4½ cm. from the margin of the placenta. The cord to the malformed fetus is attached to the placenta 4 cm. from the attachment of the other cord and measures 14 cm. x 2 mm.

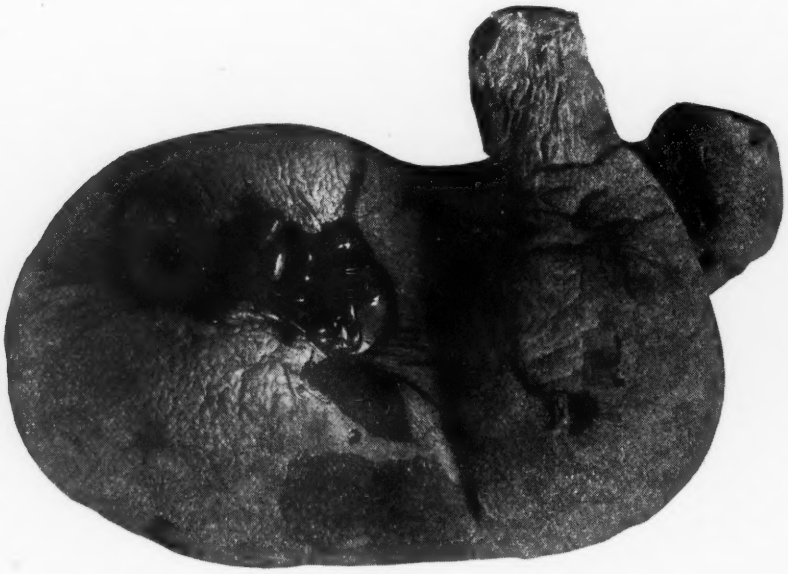

FIG. 2

CONCLUSIONS

1. The specimen presented lacks the upper part of the thorax and the head, and, having no heart (acardius), is dependent upon the heart of a twin fetus for its circulation.

2. Both fetuses had their origin in a single ovum as is evidenced by the single placenta and the single chorion.

3. It is said that the blood current is reversed in the acardiac fetus due to the greater pressure in the vessels of the fully formed fetus. The disturbances in blood supply probably account for the edematous condition of the tissue of the acardiac fetus.

4. The specimen here presented is a typical example of a headless acardiac fetus —holoacardius acephalus.

THEORIES AS TO ORIGIN

Two theories have been advanced to explain the origin of this anomaly.

Ahfeld[1] assumes that two healthy embryos may develop in a single ovum, the allantois of one being formed, by a few hours, sooner than the other. The first, reaching the internal surface of the chorion, grows entirely or partly around it. The second endeavors to do this. If it grows to a portion of the chorion, then its vessels have a small portion of the placenta for nutriment; otherwise it attaches itself to the allantois of the first and gets its nutriment directly from the umbilical cord. The heart functionates only feebly and finally atrophies, leaving a mal-development of the upper part of the body.

1Ahlfeld: Missbildungen.

Marchand and Schwalbe[2] disagree with Ahlfeld because:

1. It has been found by recent studies that the embryo does not have the free allantois assumed by Ahlfeld.

2. The theory does not account for the wide divergence of the forms if all develop at the same time.

3. It does not account at all for the acardius acormus.

Therefore, Dareste, Marchand, Schatz[3] and Schwalbe favor the theory of a defect which is developmental. One primitive streak may be imperfect from the beginning and lead to various imperfections.

Schwalbe[4] gives the following classifications of acardiac monsters:

Gemini inequales:

One twin normal, the other with:

A. Heart rudimentary—hemiacardius.

FIG. 3

B. Heart absent—holoacardius.

1. Acephalus—without a head.
2. Acormus—without a body—head only is present.
3. Amorphous—with only a lump of flesh and no recognizable organs.

[2]Schwalbe: Die Morphologie der Missbildungen, II Teil-Jena, pp. 140-174.

[3]Schatz: Beitrage zur Physiologie des Fotus, die acardii, und ihre verwandten, 1900.

[4]Schwalbe: Die Morphologie der Missbildungen. Jena, 1906.

DIAGNOSIS OF ABDOMINAL TUMORS*

H. E. RANDALL, M. D.
Flint, Michigan

A diagnosis of an abdominal tumor is made by finding an abnormal mass, the symptoms produced by it or the altered function caused by its presence. By palpation we try to determine its " size, shape, consistency, whether fluctuation, pulsation, or creaking, be present, or if it is indentable, its movability, and the organ from which it has its origin" and its relation to the other organs. A bulging of the flanks may be a tumor of the kidney or of the suprarenal gland, retention cysts and perinephritic growths or suppuration. A bilateral swelling of the flanks is seen in bilateral cystic disease of the kidneys. If the tumor be of the lower abdomen we have the advantage of a rectal and vaginal examination. If the bladder or the prevesical space is in question a cystoscopic examination will clear up the diagnosis by exclusion. Use may be had of the inflation of the colon to determine the relations of a tumor, especially if a question arises whether the tumor is of the kidney, spleen and liver, or gallbladder.

Inflation of the stomach with air may be of service in tumors of the upper abdomen. It will cause tumors of the anterior wall of the stomach to become more prominent. The inflated stomach will aid in distinguishing tumors of the spleen, and tumors and enlargements of the liver by separating one organ from the other.

Tumors of the Stomach

A dilated stomach is commonly caused by tumors of the pyloris, but dilatation of the stomach may be produced by stenosis or by fatigue of the gastric muscles. It is necessary to distinguish motor insufficiency and dilatation due to obstruction. There may be gastric insufficiency without dilatation and a dilated stomach may not be lacking in muscle tone. In stenosis the muscles of the stomach hypertrophy to meet the additional demands upon it and it requires greater force to distend it. The energy with which the air is expelled from the stomach tube may give an idea of its tone. Turck advises the following test: "Give a meal of rice, choppd meat and toast mixed with a little bran. Note carefully the time that the stomach is empty. Next day inflate the stomach several times gently until gastric peristalsis is excited. Another test meal like the above and at the same hour is given. The length of time the stomach is found empty is compared with that of the first test. If the time is shorter, say six hours, the case is not one of stenosis of the pyloris. The exercise has stimulated the fatigued muscle to quicker work." Pyloric spasm rarely causes marked dilatation of the stomach.

Inflation of the stomach with air causes tumors of the pyloric end of the stomach to be displaced to the right and either upward or downward. Tumors of the lesser curvature will be displaced beneath the liver and those of the posterior wall will be less prominent, while tumors of the anterior wall will be made more prominent.

A case having the symptoms of gastric ulcer with a tumor that may be felt is in all probability a cancer. A great many

*Read before the Lapeer County Medical Society, Oct. 14, 1909.

cases of cancer of the stomach arise from a gastric ulcer. The patient will have had the characteristic pain of ulcer two or three hours after eating, the pain being relieved by eating. There may be vomiting of blood or the patient may vomit two or three hours after meals. Later, in ulcer, when there are complications there will be pain immediately after eating. At the present time it is impossible to say and our efforts should be to make a diagnosis before a tumor becomes palpable. Cancer of the stomach has two classes of symptoms: those due to pyloric obstruction and those due to gastric atony. In both cases gastric stagnation describes the condition of gastric digestion. Our knowledge at the present time is limited to the chemical analysis and we should know in what cases to suspect cancer of the stomach. The cases that should be suspected of cancer of the stomach are those having chronic ulcer of the stomach, poor and delayed digestion, and if the case has been under observation, the progressive loss of free hydrochloric acid and those patients losing weight and still having a good or a fair appetite. There may be ulcer of the stomach with a decrease of the hydrochloric acid—not always an increase, as is commonly thought. Probably one half of the cases of ulceration of the stomach have a hypoacidity of the stomach. The unreliability of depending on the gastric analysis alone and ignoring the history or a physical examination is illustrated in a case diagnosed by a stomach specialist as gastric catarrh The case was one of an immense growth of the entire upper abdomen, and anyone could have easily diagnosed it as cancer but the stomach specialist neglected to make a physical diagnosis. The early history and the results of the physical examination and the chemical analysis should all be taken into consideration.

Gastroscopy so far has been a failure and esophagoscopy gives information only of the cardiac end of the stomach. The use of bismuth and X-ray may give useful information. The hemolytic test of Crile may be used in the future. The profession is waiting for a method of making an early diagnosis in cancer of the stomach. In cancer the vomit will be sour and ill-smelling, lactic acid fermentation, and absence of hydrochloric acid, hence undigested food and the coffee grounds or blood. When these take place, the case is well advanced, when a positive diagnosis can be made.

The other tumors of the stomach are sarcoma (rare) and the benign growths. The benign growths rarely cause symptoms unless near the pyloric end of the stomach. The benign growths are adenoma, lipoma, myoma and lymphoma.

TUMORS OF THE SPLEEN

The tumors of the spleen are distinguished by their shape, notches and rather dull edge. As the spleen enlarges the notches are turned toward the right side of the abdomen. A floating spleen is diagnosed by its absence under the left ribs. In distinguishing splenic tumors from those of the kidney the tympany of the colon is used. Inflation of the colon obscures the kidney tumor, while the spleen is brought closer to the abdominal wall. Unequal enlargement of the spleen is a cyst, an abscess or a cancer. Tumors of the spleen come under two heads, acute and chronic enlargements. The acute enlargements of the spleen are caused by typhoid, typhus, and relapsing fever, malaria, scarlet fever, pneumonia, epidemic cerebrospinal meningitis, tuberculous peritonitis, infarction, abscess, leukemia and septicemia. The chronic enlargements are due to malaria, leukemia, splenic anemia, Osler's disease, cardiac disease, cirrhosis of the

liver, Banti's disease, pseudoleukemia, primary splenomegaly, serum or blood cysts either containing serum or blood stained fluid, ecchinococcus cysts and rarely tumors; fibroma, myoma, enchondroma, lipoma, angioma, dermoid cysts, sarcoma and cancer.

In the acute enlargements of the spleen the cause is usually self evident in the run of a febrile disorder. The cases of infarct followed by abscess and enlargement due to septicemia are the most difficult to differentiate from those due to simple hypertrophy and a case due to abscess. Fortunately we are not often called upon to make the distinction. The localized pain and tenderness with enlargement of the spleen and septic symptoms would be the symptoms from which a diagnosis of abscess could be made, but in many of the cases reported there were no symptoms until the abscess had ruptured into the surrounding organs or had set up a peritonitis. In fifty-seven cases of abscess of the spleen, in only fourteen cases was a correct diagnosis made.

In the chronic enlargements of the spleen, the history and the blood examination will be used to determine the type of the enlargement. If the liver is also enlarged it assists in eliminating some of the diseases. In Banti's disease or syndrome the spleen becomes enlarged without known cause. The spleen preserves its normal contour and is firm in consistence. A progressive anaemia with occasional periods of remission develops later. The skin may become jaundiced or bronzed. This stage of the disease lasts from two to ten years. The first is followed by a scanty highly colored urine loaded with urates and contains urobilin, a stage of only a few months, when the patients have ascites with Laennec cirrhosis of the liver. In Banti's disease there is absence of lymphatic enlargement, the blood picture is between a secondary anaemia and chlorosis leukopenia. It has been thought that many cases operated on for Banti's disease in the early stages were cases of mere hypertrophy and that cirrhosis of the liver attended by hypertrophy of the spleen and hemorrhages from various parts of the body have been mistaken for the advanced stages of Banti diseases. The hemorrhages from the stomach have lead in both cases to a mistaken diagnosis of ulcer of the stomach.

Hodgkin's disease or pseudoleukemia occasionally becomes leukemia and it has been thought that they are but phases of the same pathological process. Enlargement of the spleen is not thought to be a cause of this condition. Nearly all of the splenectomies in this disease have been fatal; 98 per cent have died of hemorrhage.

After ruling out the chronic enlargements of the spleen, Banti's disease, leukemia and cases with an altered blood picture, we have enlargements of the spleen due to hypertrophy, malaria infections, cysts and tumors which may call for surgical interference.

RENAL TUMORS

Splenic tumors are made more prominent by inflating the large bowel, and as the spleen will lie in front of the colon, there will be dulness over the colon when percussion is tracing the course of the large bowel. The tympany of the colon is not interfered with by the kidney tumor. The fact that a kidney can be felt except in very thin subjects indicates that the kidney is either enlarged, displaced or is a floating kidney. A bulging of the flanks or the presence of blood in the urine calls for an examination for tumor of the kidney. The first symptom of a renal tumor may be renal colic, blood, pus or tumor shreds in the urine, tenderness or pain in the kidney

or an enlargement of the side. A proctoscopic and sigmoidoscopic examination or a cystoscopic examination with ureteral catheterization is necessary. The size of the pelvis of the kidney may be determined by the quantity of fluid that may be injected into the pelvis of the kidney through the ureteral catheter. In retention cysts, hydronephrosis, pyonephrosis, from stricture, stone, kinks, or an infected kidney the patients usually have disorders of micturition, such as painful or frequent. Blood, pus, mucus or the type of the epithelial cells found in the urine may give a clue to the diagnosis. It should be borne in mind that kidney lesions often give symptoms referred to the bladder. The kidney is best examined with the patient on the back, on the side and standing up. A kidney has a distinguishing feature, the notch of the pelvis. On the right side the kidney may be mistaken for the gall-bladder or tumor of the colon.

Hypernephromata belong in a class of tumors by themselves. Some cases have been reported in which children affected with this disease have obesity and excessive growth of hair, indicating their relationship with tumors of the pituitary and thyroid gland. Others speak of an extreme degree of calcareous degeneration of the blood vessels. A watery extract of this tumor decolorizes boiled starch stained with iodine. The symptoms of hypernephroma are recurring hematuria and pain. At the operation a yellowish mass is seen in the upper part of the kidney which may be mistaken for tuberculosis of the kidney. If a tumor is not felt in this affection either stone in the kidney or tuberculosis is usually diagnosed. Bilateral hypernephroma is extremely rare but a few such cases have been reported. Prognosis based on the microscopical findings is unreliable as the picture may be of the most malignant type with no metastases and on the other hand the micoscopical section may show a low degree of malignancy with many metastases throughout the body.

Gall Bladder and Liver

The history of gall-bladder trouble with tenderness at or near the ninth costal cartilage or at the Mayo Robson point, or the history of colic or of jaundice and perhaps accompanying disease of the pancreas will indicate gall-bladder disease. A pear-shaped tumor at the ninth costal cartilage, is an enlarged gall-bladder and its connection to the liver can usually be made out. Distention of the colon may be of service in distinguishing tumors of the upper right side of the abdomen. The gall cannot be held down after inspiration. The gall-bladder when distended feels like a pear or a banana and may be caused by gall-stone obstruction or pressure upon the common duct by growth and chronic inflammatory changes in the pancreas or by growths in the adjacent structures. The growths may be benign or malignant and may occur as the result of irritation. Curvoisier's law has exceptions but is a valuable rule well attested by the experiences of many surgeons. The law is as follows: "In cases of chronic jaundice due to blockage of the common duct a contraction of the gall-bladder signifies that the obstruction is due to stone; a dilatation of the gall-bladder that the obstruction is due to other causes than stone." It is of interest that the first operation of opening the gall-bladder was done by Bobbs of Indianapolis in the belief that he was opening an ovarian cyst. No less a surgeon than Lawson Tait mistook a greatly distended gall-bladder for an ovarian cyst. Distention of the common duct is sometimes so remarkable that it has been mis-

taken for a dilated gall-bladder, pancreatic cyst or a hydatid cyst.

A tongue-shaped process of the liver in gall-stone cases has often been noticed and is called Riedel's lobe of the liver. It does not occur in all cases of gall-stones but is frequent enough for a diagnostic point. Jaundice with an enlarged gall-bladder is one of the symptoms of cancer of the pancreas and of the biliary ducts, and because of the hidden position of the pancreas is a valuable symptom. In a few cases of malignant disease of the pancreas the gall-bladder was not distended.

ENLARGEMENTS OF THE LIVER

The liver is enlarged in amyloid liver, in the leukemias, in biliary infections, in heart diseases, in hypertrophic cirrhosis, in cysts of the liver and in various infections. The enlarged liver due to cardiac insufficiency will be recognized in the examination of the damaged heart. Hypertrophic cirrhosis is differentiated from the enlargements of the liver due to biliary obstruction by the symptoms and history of the cases; the latter has tenderness over the gall-bladder, a history of hepatic colic and perhaps an enlarged gall-bladder, fever and pain. Enlargement of the liver may be noticed when gall-stones are attempting to pass down the gall-ducts. Amyloid and fatty liver will be recognized in the concomitant symptoms or habits of the patient. Corset liver is a deformity of the right lobe of the liver forming a tongue-shaped prolongation downward and which allows the intestines to crowd in between the liver and the abdominal wall. Cysts of the liver are the echinococcus and dermoid. A diagnostic feature is that echinococcus disease has an eosinophilia of from two to eight per cent. General or local enlargements of the liver may be caused by the retention of the bile or abscess. The abscess of the liver will have septic symptoms with soreness and tenderness. In suppurative conditions of the liver during the first stage of inflammatory irritation there is an increase of urea in the urine. When pus has formed and the destruction of a certain amount of hepatic tissue has taken place there is a decrease of urea. The fever would naturally cause an increase of urea, but in hepatic abscess there is an inverted relation of fever and urea. There may be chills and fever, but they refuse to yield to quinine. Cysts of the liver may become septic and may perforate the stomach or the intestines or may break into the abdominal cavity or subphrenic space. The fluid in a cyst may be under such great tension that it will feel like a solid tumor.

The solid tumors of the liver are cancer, adenoma and sarcoma. Cancer and sarcoma are secondary, a primary malignant growth of the liver being exceedingly rare. The diagnosis of gumma will depend upon the history and the results of treatment by the iodides. Several cases of gumma have been diagnosed as cancer. Abscess of the liver will depend upon the history of some septic disease or of amebic dysentery.

PANCREAS

While tumors of the pancreas have been found post-mortem such as adenoma, lymphoma and sarcoma, the two forms of tumor that the physician will be called upon to diagnose are cyst and cancer of the pancreas. Cysts of the pancreas arise from the head or the tail of the pancreas while cancer springs from the head. Cancer produces symptoms referable to the liver due to the obstruction of the bile ducts. The jaundice is commonly painless. The most characteristic symptoms outside of the jaundice are the clay colored stools, the very rapid loss of strength and flesh and the temperature is apt to be sub-normal. The deep position of the pancreas prevents palpation of that

organ but an ill defined mass of resistance may be made out above the umbilicus and along the inner border of the right rectus muscle. In malignant disease of the bile ducts both the spleen and liver are apt to be enlarged. In a few instances the gall-bladder was not enlarged in malignant disease according to the law of Curvoisier. In malignant disease there is often a previous history of biliary lithiasis. In the beginning the patient thinks it but mere indigestion and there may be vomiting. An enlarged pancreas was thought to be cancerous from the nodular condition found at operation on the bile ducts but as many such cases recovered after drainage of the bile ducts the condition of the pancreas was proved to be a chronic pancreatitis instead of cancer of that gland. Chronic pancreatitis has not the rapid and severe wasting of flesh and strength that occur in cancer. The various tests (Cammidge and others) and the hemolytic test of Crile for cancer may give valuable information in doubtful cases. The cysts of the pancreas may present themselves above the stomach, between the stomach and the transverse colon, or below the colon.

TUMORS OF THE INTESTINAL AREA OF THE ABDOMEN

The tumors that may be found in this area of the abdomen comprise all of the tumors that may arise from any organ of the abdomen.

This area is involved or occupied by any abdominal growth when it becomes very large. Splenic, ovarian, parovarian, uterine, nephritic and pancreatic are the most common that will be found when the tumor is large. In cystic tumors fluctuation may be detected. In fleshy people the edge of an assistant hand will eliminate the fat waves. An encysted tumor of the abdomen has a rounded appearance and stands up prominently when the patient lies on the back. Free fluid in the abdomen, an ascites, will seek the flanks when the patient is in the recumbent position and instead of a round appearance the abdomen has a flat top, unless the abdomen is very full. A greatly dilated stomach has in several instances been mistaken for an ascites and the use of the trocar has led to the bitter disappointment of having food coming through the trocar. In the top of an ascites will be an area of tympany due to the fact that the intestines rise to the highest level of the fluid. Cysts having a rounded appearance are the ovarian, parovarian, distended urinary bladder, enormously distended gall-bladder, pancreatitic cysts, cysts of the spleen, mesenteric cysts, hydatid cysts, hydronephrosis, and encysted fluids as in tubercular peritonitis and abscess formation. The abscess is not apt to have the rounded appearance like the others of this group. The diagnosis is made as a rule by elimination. The ovarian in the beginning will be noticed on one side more than the other. The kidney cases will have changes in the urine and the tumor can be traced up in the upper abdomen.

Aneurisms of the abdominal aorta and of its branches will give a tumor having the characteristic bruit, and palpation will show its expansile character. A tumor may have the pulsations of the abdominal aorta communicated through it but it lacks the expansile character. Thrombosis of the abdominal aorta or its branches or pressure upon its channels may cause gangrene or swelling of the thigh and leg. Many times the pressure of a large tumor on the return circulation will cause an edema of one or both legs.

Tumors of the intestine are rarely detected until they give rise to symptoms of obstruction of the bowels or their presence

is surmised from changes in the stools, such as diarrhea or constipation, ribboned or narrowed stools. Interference with the fecal passages may cause colic or visible peristalsis, or an area or tympanitis is seen or felt through the abdominal walls. The benign growths of the intestines are cysts, myoma, fibroma, adenoma lipoma and rarely cause symptoms until obstruction of the bowels occurs, either acute or chronic. If these growths can be palpated they are felt as smooth, movable, and painless tumor. Obstruction of the bowels occurs when the growth is occluding the lumen, or when the tumor is carried down the intestinal stream forming an intussusception, or twists or kinks of the bowel occur blocking the fecal passage.

The cysts of the mesentery and benign growths of the peritoneum and omentum are rarely diagnosed as such before operation. If a centrally located movable fluctuating tumor is crossed in front by a bowel it is a mesenteric cyst. Chylous cysts of the mesentery can hardly be diagnosed from the other fluid tumors of the mesentery, and a distinguishing point might be the discomfort after eating when absorption is taking place. The complications may be peritonitis or obstruction of the bowels. A mass firmly adherent to the surrounding organs may be due to abscess or tubercular infection. Tumors may become adherent to the intestines and form an irregular mass but the history will usually give information to eliminate septic and tubercular infections. Diverticulum of the bowels as the result of inflammation will have dense adhesions thrown around it and many of the cases have been thought to be cancer. When inflamed the symptoms are similar to appendicitis. These cases are rare. The sigmoid has given more cases than other parts of the bowels.

Malignant tumors of the bowels usually occur in the large bowels. In the Mayos' statistics the ileocecal region was the most frequent site of cancer. The rectum furnishes nearly one half of the malignant tumors of the bowels. The early symptoms of malignant disease will be those of functional diseases of the bowels. Constipation rather than diarrhea is given as the early symptom. Rectal specialists advise us to make a rectal and sigmoidoscopic examination in all cases of constipation or diarrhea. A nodule of beginning cancer has not a movable mucous membrane covering it. If ulcerated it may be some time before blood is detected in the stools. A rapid growing tumor in the central region of the abdomen may be sarcoma. If occurring in a young person the probability of the growth being a sarcoma is about certain; in adults a cancer. Cancer of the transverse colon will early have involvement of the lymph nodes about the pancreas. Cases have been reported of cancer of the ileocecal region in which it was impossible at the operation to tell without a microscopical examination whether the growth was a cancer or tuberculosis. Contrary to the ideas of the laity that cancer of the bowels is painful, a malignant growth may attain quite a growth before the pain would cause them to seek medical advice. It is the blood and the fetid discharge of the stools that arouse a suspicion of cancer. Most of the patients come to the doctor with their own diagnosis of piles. If the tumor is of the scirrhus type early stenosis may cause symptoms which make the growth recognizable by causing a dilation of the bowels above the seat of the growth and the extra efforts to propel the intestinal contents through the narrowed opening. The symptoms would be abdominal pain, vomiting, diarrhea, or constipation; the symptoms of chronic intes-

tinal obstruction. Colicky pain from the exaggerated intestinal peristalsis are the suggestive signs of chronic obstruction due to cancer and stricture due to other causes.

TUMORS OF THE PELVIS

Prominent surgeons have mistaken a pregnancy for a cystic tumor. The solid tumors of the pelvis are the fibroma and sarcoma of the ovaries; fibroma and cancer of the uterus; floating kidney, extra-uterine pregnancy, lithopedeon, tumors of the cecum, sigmoid and rectum; hypertrophy and tumors of the prostate; and pelvic tuberculosis. The cystic tumors of the pelvis are the distended bladder, ovarian cysts, tubal pregnancy, pyosalpinx, parovarian cyst, dermoid cyst and pelvic exudate due to inflammation, hematocele, collection of pus and blood and pregnancy. Bi-manual examination is made with one hand on the abdomen and the finger in the vagina or rectum. An effort is first made to mark out the normal organs and if a mass is found on examination our efforts are directed to determine its consistency, origin, size and its relations to the normal anatomy. Ovarian and parovarian cysts, if their pedicle becomes twisted, have symptoms of peritonitis, appendicitis or of obstruction of the bowels. Cancer and fibroma of the uterus have a vaginal discharge of the blood as one of the symptoms. The discharge is inclined at first to be watery or serum like. Irregularities of menstruation, either the loss of too much blood at the menstrual time, or between the regular monthly periods, will suggest fibroids, or cancer if of the cancerous age or where there is no other satisfactory explanation of the extra flow of blood. Collections of pus will give a history of fever or chills, an attack of appendicitis, labor, abortion or septic infections or a history of gonorrhea. In ectopic pregnancy the symptoms will be that of an ordinary pregnancy until abortion or menstruation is supposed to have taken place or there are sudden pains and fainting or collapse. If there be the symptoms of pregnancy, and uterine pregnancy can be ruled out, a mass felt in the Fallopian tube and inflammatory conditions can be ruled out, the case is one of extra-uterine pregnancy.

The retro-peritoneal tissues may be the seat of tumor or of suppuration. Suppurative conditions come from diseased vertebrae, sepsis in the abdomen, absorption through the mesenteric and retro-peritoneal glands. Sometimes suppuration appears primarily. The disease may be confused with hip joint and sacro-iliac disease. Retro-peritoneal hemorrhage and hematocele are rare and the symptoms will be obstruction of the bowels due to the pressure or misplacement of the mesentery. Retro-peritoneal lipoma is another rare condition and some of the cases were thought to be ascites until attempts were made to use the trocar when no fluid was found. Others of the cases were thought to be ovarian cysts. Edema of the lower extremities, dyspnea, and vomiting occur in this disease. Death occurs in from two to five years. In the beginning of this peculiar condition there are no symptoms.

The Journal of the Michigan State Medical Society

All communications relative to exchanges, books for review, manuscripts, advertising and subscriptions should be addressed to Wilfrid Haughey, A. M., M. D., Editor, 24 West Main Street, Battle Creek, Michigan. The Society does not hold itself responsible for opinions expressed in original papers, discussions or communications.

Subscription Price $2.00 per Year, in Advance.

SEPTEMBER

EDITORIAL

"Look at the program and decide if you can afford to miss the papers, decide even more carefully whether you can afford to miss the stimulus of contact with your old time friends, with keen, enthusiastic men. Bring your wife and daughters; bring your own enthusiasm and carry back a fresh enthusiasm to your work. You may miss two days from the daily grind of practice, but your patients, in the months to come, will feel your enthusiasm, and esteem you as a man who keeps up with the profession."

DAVID INGLIS.

THE BAY CITY MEETING

Forty-Fifth Annual Meeting of the Michigan State Medical Society, Bay City, September 28, 29

The forty-fifth annual meeting of the Michigan State Medical Society convenes this month in Bay City. A complete and interesting scientific program has been prepared, and is published in this issue of the JOURNAL.

The arrangements committee has been busily at work for several months, and no detail has been too small to receive careful attention. All the sessions of House of Delegates, Sections and General meeting will be held in the Ridotto, thus giving us a more unified meeting, and it is hoped one free from confusion.

The time is late enough so that all will have returned from their vacations, and early enough so that we will not be hindered by the rush of our fall and winter work. The weather at Bay City should be conducive to the best of scientific and social enjoyment—neither too hot, nor too cold.

Bay City is easily accessible to all parts of our State, is a city of ample proportions and ample accommodations, has an enthusiastic profession and can well take care of us. A large attendance is desired and expected. The meeting at Kalamazoo last year was the largest ever held outside of Detroit—let this one set a new record—one that has never been exceeded even by Detroit. The expense of attending is small, and the confidence, zeal and enthusiasm, absorbed, imbibed and soaked in, are great.

LET US ORGANIZE

The objects of our medical organization are worthy, our work important, and we should have the active support of every reputable member of our profession in Michigan. There may be some activities of our Society which do not receive the endorsement of every member, but in this democratic country the majority rules, and the officers and representatives try to carry out the wishes of this majority. If your wishes are not followed in some particular the remedy is easy—become a more active member; take a more active part in the County Society meetings, become a delegate, or help elect your delegate to the State Society. Be among the first to pay your annual dues; be among the foremost workers for the development of your society—then you will be a power to demand and receive recognition. Your views will be heeded and sought after. The ideas and views of the most modest of our members are not intentionally ignored, but the strong active member, the recognized leader, the progressive, constructive man enforces attention to his ideas.

In these times of establishment of sects in medicine our profession should stand

J. H. Carstens

together as one man to maintain the common good; to protect the rights and privileges of every one of us. Our voice on matters of Public Health and Medical Legislation should rise as one united chorus that would compel attention and respect in the halls of legislation, both State and National. It should compel attention and respect in the executive branch of our government, both National, State and Local—to the end that offenders against our laws may be apprehended. It should compel attention and respect in the Judiciary that justice may be meted out; that quacks and law-breakers in matters involving practice of medicine and public health, as well as other matters of law, should be promptly and justly dealt with.

This strength and unity of voice is a condition greatly to be desired, a condition as yet far from attained, but a condition by all means attainable.

How often have we as individuals petitioned our legislators or our congressmen for the enactment of certain legislation? And what has been the result? An equivocal letter stating that "the matter will receive my careful attention."

When we are more firmly banded together, when we can approach these various public officials and state that we are a united profession in Michigan; that we are of one mind in regard to this measure; that we demand its enactment; that we can control our own three thousand votes and many more if need be—then, and then only will our voice be listened to; our opinions sought. Our profession will have come into its heritage of respect and honorable living.

Each member of the profession has it within his power to hasten this approach to the millennium. Each one should take a more active part in our work; attend all medical meetings that he can and enter into the spirit of organization, for it is all a question of organization. We must organize ourselves, our neighbors, our patients and our friends. But first of all we must organize ourselves.

ARE YOUR 1910 DUES PAID?

On August 1st 1529 members of the Michigan State Medical Society had been reported by the County Secretaries as having paid their dues for the year 1910. There are credited on our books 2079 members, which means that one out of every four is still in arrears. The State Society is being incorporated now, and when this is completed will have to transact its business as an incorporated body, and according to prescribed laws of the State.

The House of Delegates is composed of members elected by each County Society, and apportioned according to the membership in the County Society. If all members have not paid their dues their society may not have its full quota of delegates,—if delegates themselves have not paid they cannot be seated.

Each member of the State Society whose name has been reported to the State Secretary has received a card, reading as follows:

> This is to certify that Dr..... ..... is a member in good standing in the MICHIGAN STATE MEDICAL SOCIETY for 1910, and that he is entitled to register at the Bay City Meeting on presentation of this card.
>
> WILFRID HAUGHEY,
> *State Secretary.*

Registration at the meeting at Bay City will be by presentation of the above described card, so do not fail to bring it with you.

PROGRAM OF THE FORTY-FIFTH ANNUAL MEETING OF THE MICHIGAN STATE MEDICAL SOCIETY, BAY CITY SEPTEMBER 28 and 29, 1910

Meeting Places

The General Session, House of Delegates and all the Sections will meet on the third floor of the Ridotto.

Registration will be at the window on the third floor.

Commercial Exhibits will be on the first floor.

THE COUNCIL

Chairman, W. T. Dodge, Big Rapids.
Secretary, W. H. Haughey, Battle Creek.

Meetings

Tuesday, September 27, 3:30 P. M.
Wednesday, September 28, 2:00 P. M.
Thursday, September 29, 2:00 P. M.

HOUSE OF DELEGATES

Auditorium, Ridotto

President—J. H. Carstens, Detroit.
Secretary—Wilfrid Haughey, Battle Creek.

By-Laws—Chapter IV, Section 1. Each Component County Society shall be entitled to send to the House of Delegates each year one delegate and one alternate for every 50 members, and one for each major fraction thereof; but each County Society holding a charter from this Society, which has made its annual report as provided in this Constitution and By-Laws, shall be entitled to one delegate and one alternate.

First Session, Tuesday, September 27th
8:00 P. M.

1. Call to order by the President.
2. Report of Committee on Credentials.
   H. R. Varney, Detroit, Chairman.
3. Roll Call.
4. Reading of minutes of the last Annual Meeting.
5. Report of the Council.
   W. T. Dodge, Big Rapids, Chairman.
6. Report of Committee on Legislation and Public Policy and on the work of the National Legislative Council.
   W. H. Sawyer, Hillsdale, Chairman.
7. Report of Medico-Legal Committee.
   F. B. Tibbals, Detroit, Chairman.
8. Report of Special Committee on Revision of the Constitution and By-Laws.
   B. R. Schenck, Detroit, Chairman.
   (a) Proposal of Amendments to the Constitution.
   (b) Proposal of Amendments to the By-Laws.
9. Miscellaneous Business.
   (a) Election of Committee on Nominations to nominate:
   1st, 2nd, 3d and 4th Vice-Presidents.
   Councilor for the 7th District to serve until 1911.
   (Dr. Kay was appointed to fill vacancy caused by resignation of Dr. M. Willson.)
   Representatives and alternates in House of Delegates, A. M. A. for two years to succeed F. W. Robbins, and S. C Graves.
   To fix place of meeting for 1911.
   "The House of Delegates shall elect annually, at its first meeting, a Nominating Committee of Five from the House of Delegates, no two of whom shall be from the same Councilor District."
   (By-Laws, Chapter VI, Sec. 2 as amended June 12, 1903.)
   (b) Appointment of Business Committee and other Working Committees.
   Other Miscellaneous Business.
   (Recommendations of Council.)

Adjournment.

Second Session, Wednesday, September 28th
8:30 A. M.

1. Reading of the Minutes of the Previous Session.
2. Unfinished Business.
   (a) Amendments to Constitution and By-Laws.
3. Report of the Committee on the Study and Prevention of Tuberculosis.
   H. J. Hartz, Detroit, Chairman.
4. Report of Committee to Encourage the Systematic Examination of the Eyes

and Ears of School Children throughout the State.

Walter R. Parker, Detroit, Chairman.

5. Report of Committee on the Relation of the Medical Department of the University of Michigan to the Medical Profession of the State.

E. T. Abrams, Dollar Bay, Chairman.

6. Report of Committee on Medical Education.

David Inglis, Detroit, Chairman.

7. Report of Committee on Arrangements.

Virgil Tupper, Bay City, Chairman.

8. Miscellaneous Business.

Councilor's Traveling expenses.

Adjournment to General Meeting, 10 A. M.

Third Session, Thursday, September 29th.

8:00 A. M.

1. Reading of the Minutes of the Previous Session.
2. Report of Committee on Nominations.
3. Election of Officers.
4. Report of Committee on Venereal Prophylaxis.

A. P. Biddle, Detroit, Chairman.

5. Unfinished Business.
6. Miscellaneous Business.

Adjournment to Section Meetings.

GENERAL MEETING

Auditorium, Ridotto

President—J. H. Carstens, Detroit.
Secretary—Wilfrid Haughey, Battle Creek.

First Day, Wednesday, September 28th.

10:00 A. M.

1. Call to order by the President.
2. Prayer.

Rev. T. S. Anderson.

3. Address of Welcome.

For City—Mayor Gustavus Hine.

For Bay County Medical Society—Dr. J. W. Hauxhurst.

4. Report from the House of Delegates.

Wilfrid Haughey, State Secretary, Battle Creek.

5. Address of the President.

J. H. Carstens, Detroit.

Subject:

6. Address—Dr. George W. Crile, Cleveland.

Subject: "The Cancer Question."

7. Miscellaneous Business. Under this head there will be a general discussion of questions on medical economics. This opportunity is given to any member who wishes to bring before the entire society, any subject of general interest, either by informal discussion, or by formal resolutions.

(a) Leartus Connor, Family Physician Refracting.

(b) Michigan Retail Druggists Ass'n.

8. Nominations for President, 1910-1911.

Adjournment.

Wednesday Evening

8:00 P. M.

Ridotto Auditorium

Address—Guy L. Kiefer, Detroit.

Subject:

Reception given by Hon. W. L. Clements, Regent of the University, at his home.

Second Day, Thursday, September 29th

11:30 A. M.

1. Unfinished Business.
2. Report from the House of Delegates.

Wilfrid Haughey, Battle Creek, Secretary.

3. Miscellaneous Business. Another opportunity to bring to the attention of the general body any questions of general interest.
4. Announcement by the Committee on Nominations of the result of the Ballot for President.
5. Introduction and Installation of President-elect.

Adjournment sine die.

SECTION MEETINGS

Third Floor Ridotto.

On account of the length of the program and in order to give every one an opportunity, the fifteen minute rule will be enforced.

The Secretaries of the Sections will collect all papers as soon as read.

Discussions are limited to five minutes.

SECTION ON GENERAL MEDICINE

Ridotto, Third Floor

Chairman—Frank Smithies, Ann Arbor.
Secretary—A. S. Kimball, Battle Creek.

The Secretary of the Section will collect all papers as soon as read.

First Session, Wednesday, September 28th
1:45 P. M.

1. Chairman's Address.
   Frank Smithies, Ann Arbor.
2. Interpretation of Gross Urinary Findings in Genito-Urinary Diseases.
   W. E. Keane, Detroit.
3. Use of Carbon Di-Oxide Snow, and Demonstration of New Instrument for Moulding Snow.
   Andrew P. Biddle, and
   R. A. C. Wollenberg, Detroit.
4. Pellagra.
   Benton Colver and E. L. Eggleston, Battle Creek.

1. Clinical report of three cases with diagnosis and treatment. (Dr. Colver.)
(a) Clinical report, four cases, diagnosis and treatment.
2. Clinical report of one case together with autopsy of one case; together with etiology and pathology of pellagra. (Dr. Eggleston.)
(b) Autopsy of one case, etiology and pathology.

5. Some Points in the Management of Breast Feeding.
   Thos. B. Cooley, Detroit.

1. Possibility and desirability of more general breast feeding. (Efforts of pediatrists and sanitarians.)
2. Need of more attention to this subject on the part of general practitioners.
3. Contraindication for nursing. Some unfounded prejudices. Unnecessary weaning.
4. Routine management, modern ideas, diet of mother.
5. Interval between feedings. Regularity of feeding.

Second Session, Thursday, September 29th
9 to 11:30 A. M.

1. Tuberculin in the Diagnosis and Treatment of Tuberculosis.
   Collins H. Johnston, Grand Rapids.
2. A Business Man's Cold.
   J. Vernon White, Detroit.

1. Vocation and habits as etiological factors in a common cold.
2. How to prevent a cold.
3. How best, and to what extent can a physician regulate a system of treatment by which a man can continue with his business without jeopardizing his health.

3. Stomach Disorders Requiring Surgical Intervention from the Viewpoint of an Internist.
   Chas. D. Aaron, Detroit.

Utilization of statistics. Author's position as to surgical treatment of stricture of the cardia, ulcer, hemorrhage, pyloric stenosis, hour glass stomach, dilatation, gastroptosis and carcinoma.

4. The Detecion of Acid Fast Bacteria (particularly Tubercle Bacilli) in Sputum, Pus, Pathological Tissue, etc., by the so-called "Antiformin Method."
   Sober Ide and Frank Smithies, Ann Arbor.

Common knowledge that the ordinary methods for the microscopic and cultural detection of acid-fast bacteria (especially tubercle bacilli) are inadequate. Recent "digestive methods" more accurate than simple staining technique. Digestion by means of "antiformin," or "antiformin" and ligroin offers greater accuracy.

11:30 adjourn to General Meeting.

Third Session, Thursday, September 29th
1:45 P. M.

Election of Chairman for 1911.

1. Some Phases of Psychotherapy.
   Chas. W. Hitchcock, Detroit.

1. Introduction, introspective.
2. The omnipresent phase.
3. The superstitious phase.
4. The popular phase.
5. The passing churchly phase.
6. A glimpse of the really meritorious psychotherapy, scientifically and psychologically founded, what it aims to, and can accomplish.

2. The Future of Psychotherapy and Its Practical Application.
   Theobold Klingman, Ann Arbor.

1. The psychic mechanism of hysteria and other psychoneuroses.
2. The psycho-analytic method of treatment.
3. Auto-suggestion.
4. Degrees of suggestibility.
5. Practical applications of psycho-therapeutics in physical disease.
6. The value of psycho-analysis for diagnostic purposes.
7. Dangers and limitations of psychotherapeutics.
8. Psycho-therapeutics: Its practical application must vary with each individual case and must be based upon the results of a careful psycho-analysis.
9. Reports of cases illustrating successful treatment.

3. The Differential Diagnosis of Organic and Functional Diseases of the Stomach.
   James E. Davis, Detroit.

1. The chief graphic signs should be as well known as their names. Functional signs will be most frequently used in eliminating the less important.
2. The patient's history should be expertly obtained.
3. Data should be critically thrown against data.
4. Indecision should hark one back to original history.

4. The Crusade against Tuberculosis from a Practical Standpoint.
   Victor C. Vaughan, Jr., Detroit.

1. How the work has been conducted in Detroit.
2. What steps were found necessary in order to properly conduct the fight against the disease.
(1) The use and limitations of the dispensary.

(2) The tuberculosis hospital as an adjunct to the dispensary.

(3) The proper scope of a city tuberculosis hospital.

(4) Care of patients in their homes and its relative value.

(5) The physician as an aid in the tuberculosis campaign.

5. Bacterial Inoculations in the Treatment of Rheumatic Arthritis.

G. A. Perrson, Mt. Clemens

6. The Diagnosis of Gastric Ulcer.

John T. Watkins, Detroit.

Many gastric ulcers are discovered only at autopsy, others simulate other diseases. Essential elements in the diagnosis; important special symptoms: objective signs; location of ulcer; occult blood in the stools, and method of detection; laboratory procedures. Complications and sequelae. Conditions from which ulcer must be differentiated.

SECTION ON SURGERY, OPHTHALMOLOGY AND OTOLOGY

Chairman—W. J. DuBois, Grand Rapids.

Secretary—R. E. Balch, Kalamazoo.

The Secretary will collect all papers as soon as read.

First Session, Wednesday, September 28th
1:45 P. M.

1. Chairman's Address—

W. J. DuBois, Grand Rapids.

2. The Administration of Anesthetics.

C. E. Boys, Kalamazoo.

Importance of properly given anesthetics..... General principles.....Selection of anesthetic and apparatus.....Preparations for anesthesia .....Position.....Protection of patient..... Indications of Depth of anesthesia.....Treatment of emergencies.....Anesthetics for clinics .....Post-anesthetic care.....Anesthesia for nose, mouth and throat work.

3. Tincture of Iodine as a Skin Disinfectant.

H. O. Walker, Detroit.

Grossich's original ideas as propounded in 1908. Modification of this by Bogden, Zabludowski, Papinian, Nast-Kolb, myself and others.

The use of tincture of iodine as a means of sterilization for the skin is of comparative recent origin and has already won many friends. The author has used it with good results in a great number and variety of cases. Of special value in accident surgery.

4. Post-Operative Treatment.

A. W. Blain, Detroit.

5. Operations Under Local Anesthesia for the Radical Cure of Inguinal and Femoral Herniæ.

J. A. MacMillan, Detroit.

The Surgical anatomy of these regions favors the successful employment of local anesthesia.

Nerve-block not applicable in operation for femoral hernia. Advantages of local over general anesthesia for these operations. Modifications of operative technique required.

6. The X-ray Photograph As an Aid in Diagnosis of Suppurations in the Mastoid and Accessory Sinuses of the Nose.

Edward J. Bernstein, Kalamazoo.

The readiness with which differential diagnosis can be made to eliminate sound sinuses. Anomalies of structure clearly shown making thorough opening of pockets and breaking down of more or less complete divisions a certainty in radical cures. Only thoroughly good plates reliable. Illustration by lantern slides.

Second Session, Thursday, September 29th
9 to 11:30 A. M.

1. Indications, Contra-Indications, and Results in Tonsillectomy.

B. R. Shurley, Detroit.

Brief summary of European and American Teaching.

Varieties of tonsillar pathology requiring operation. Hypertrophy, recurrent tonsillitis. Quinsy. enlarged cervical glands, tuberculosis, rheumatism, arthritis, systemic infection, aural disease, thyroid conditions. Contra-indications—haemophilia, anaemias and other diseases of the blood. Pulmonary tuberculosis, test of the coagulation point. Operations when patient is over forty years of age, or under two years. Dangers from anesthesia, hemorrhage or traumatism. Tonsillectomy a hospital operation. The general practitioner. The general specialist, and the specialist, operative technique. Personalities and personal equation. Experience and deductions from one thousand operations. Conclusions.

2. Surgical Treatment of Goiter.

C. D. Brooks, Detroit.

3. Gastro-Enterostomy.

Angus McLean, Detroit.

Its effects on duodenal and gastric ulcer. Some new etiological factors of duodenal ulcer. Effect of retained secretions in the duodenum. Method of operation, with reference to cases.

4. Rupture of the Bladder with Report of a Case.

R. C. Stone, Battle Creek.

Source and mode of Injury; symptoms, diagnosis; prognosis; treatment. Report of a case.

5. Coccydynia.

A. S. Youngs, Kalamazoo.

A paper in which is briefly considered some of the traumatic and pathologic causes of pain within the female pelvis, wherein error of diagnosis and treatment is common.

Also, the consideration of those cases which seek relief through the agency of surgical intervention.

Adjourn to General Meeting at 11:30 a. m.

Third Session, Thursday, September 29th
1:45 P. M.

Election of Chairman for 1911.

1. Spina Bifida.

N. S. McDonald, Hancock.

Embryology of the Spinal Cord. Varieties of Spina Bifida Etiology, Symptoms, Diagnosis. Treatment with especial reference to excision of sac. Report of cases and prognosis.

Discussion opened by Angus McLean, Detroit.

2. **The Diagnosis of Surgical Diseases of the Kidneys and Ureters.**

James D. Matthews, Detroit.

Morphology of the kidney with special reference to the blood supply—the diagnosis of neoplasms, stone, perinephric abscess. The paper emphasizes the importance of recent diagnostic accessories—the cystoscope and ureteral catheterization as a means of segregating the urine of each kidney for examination—conditions producing disturbance of the functioning powers of the kidney are discussed. Heretofore there has been too much prescribing in a general way for these conditions. The Roentgen ray, the cystoscope, the ureteral catheter and the microscope lifted this department of medicine from the realm of empiricism and placed it within the domain of scientific certainty.

3. **The Non-Operative Treatment of Varicose Veins of the Legs.**

W. A. Hackett, Detroit.

4. **The Truth About Incontinence Following Rectal Operations.**

Louis J. Hirschman, Detroit.

So much error exists in the minds of laity as well as a small percentage of the medical profession regarding incontinence of feces following some rectal operations that the reasons for this erroneous idea are given. Incontinence, post-operative, is almost inexcusable. Reasons for its occurrence and how to avoid it.

5. **Concerning the Cerebral Complications of Suppurations of the Temporal Bone.**

R. Bishop Canfield, Ann Arbor.

6. **Lessons Learned from Five Hundred Consecutive Cataract Extractions.**

Walter R. Parker, Detroit.

Preparation of the patient, including a bacteriological study of the lids.

The technique in the operation that has given the best results.

The routine use of atropine before extraction.

And Finally, Comparison of the results obtained from 35 extractions in the capsule after the so-called Smith Method, with those obtained by the classical operation.

SECTION ON GYNECOLOGY AND OBSTETRICS

Ridotto, Third Floor.

Chairman—John Bell, Detroit.

Secretary—Rolland Parmeter, Detroit.

The Secretary of the Section will collect all papers as soon as read.

First Session, Wednesday, September 28th

1:45 P. M.

1. **Chairman's Address—John Bell, Detroit.**
2. **A Symposium on Obstetrical Anesthesia.**

I. Scopolamine and Morphine.

W. H. Morley, Detroit.

Historical. Nature and action of scopolamine on the human system. Dosage. Action of morphine. Their combined action. Dosage. The use of scopolamine and morphine in obstetrics. The method and technique of their administration. The effect upon labor pains. The dangers to the mother and child. Results. Conclusions.

II. Chloroform and Ether.

N. N. Wood, Ann Arbor.

Chloroform not the ideal anesthetic for obstetrical use. Its disadvantages. It is not as free from danger as is commonly believed or as the texts usually state. The element of danger is distinctly increased when chloroform anesthesia is used for obstetrical operations.

Ether may be used as a routine anesthesia in obstetric work. Method of administration as practiced at the University Hospital Maternity. Results obtained. Conclusions.

III. Technique of Anesthesia in Obstetrics.

J. B. Whinery, Grand Rapids.

IV. Anesthesia in Its Relations to Postpartum Hemorrhage.

John Bell, Detroit.

Discussion opened by R. R. Smith, Grand Rapids.

Second Session, Thursday, September 29th

9 to 11:30 A. M.

A Symposium upon Inflammatory Diseases of the Pelvis.

1. **Etiology and General Consideration of Pelvic Inflammation.**

B. R. Schenck, Detroit.

2. **Treatment of Puerperal Infections.**

W. F. Metcalf, Detroit.

Prevention. Serum treatment. Cul-de-sac incision. Food and Medication. Elimination.

3. **Value of Vaginal Incision in Acute Pelvic Infections.**

Reuben Peterson, Ann Arbor.

Inadvisable to operate from above in acute pelvic infections because, First: Such septic patients do not stand prolonged abdominal operations well.

Second: Contamination of peritoneal cavity by contents of pus tubes will result in death from peritonitis in a certain percentage of cases, on account of mixed infection present.

Better plan is to open through vagina and establish good drainage. Later on when pulse and temperature are normal, if patient still has pelvic symptoms, a laparotomy can be safely performed and all or part of the internal genitalia removed.

Technique of vaginal incision.

4. **Abdominal Operations for Acute Pelvic Infection.**

Max Ballin, Detroit.

Incision of abscess. Conservative operations. Salpingectomy, etc. Hysterectomy. Ligation for thrombo-phlebitis.

Discussion opened by J. H. Carstens, Detroit.

11:30 adjourn to General Meeting.

Third Session, Thursday, September 29th, 1:45 P. M.

Election of Chairman for 1911.

1. Immediate Versus Deferred Operation for Intra-Abdominal Hemorrhage Due to Tubal Pregnancy.

H. H. Hewitt, Detroit.

Arguments advanced by operators favoring deferred operation and those favoring immediate operations.
Report of 39 cases.
In about 95 per cent of cases there is little difference whether operation is immediate or deferred.
In remaining 5 per cent of cases or cases in profound shock from hemorrhage, there is opportunity for argument as to time for operation.
Hypodermoclysis, enterolysis and intravenous transfusion in shock subsequent to rupture of the tubes.
Suggestion for blood transfusion in these cases.
Question of Haemolysis in blood transfusion.
Summary.

2. What the Colon Tube Will and Will Not Do.

H. Wellington Yates, Detroit.

Absorption in the rectum and colon. How is the process favored and how impeded? Does the colon tube, so-called, really enter the colon when we endeavor to have it? Skiagraphically illustrated.

3. The Use of Cancer Residue.

J. W. Vaughan, Detroit.

The results following the injection of foreign and altered autogenous proteids into the body. Blood changes following the hypodermic administration of cancer residue. The use of cancer residue (a) in inoperable cancer and (b) in so-called operable cancer with special reference to cancer of the uterus and breast.

4. Galvanism in Gynecology.

Eugene Miller, Battle Creek.

Discussion.

Delegates to the Forty-Fifth Annual Meeting

Note.—The Black Face name is that of the delegate, the other, that of the alternate.

Antrim—Branch No. 65

L. S. Willoughby, Mancelona.

Barry—Branch No. 26

G. W. Lowry, Hastings.
E. Fuller, Hastings.

Bay—Branch No. 4

W. R. Ballard, Bay City.
John McLurg, Bay City.

Benzie—Branch No. 59

G. O. Edmonds, Honor.
E. J. C. Ellis, Benzonia.

Berrien—Branch No. 50

E. M. Kerry, Benton Harbor.
C. M. Merritt, St. Joseph.

Branch—Branch No. 9

A. G. Holbrook, Coldwater.
H. W. Whitmore, Quincy.

Calhoun—Branch No. 1

H. A. Powers, Battle Creek.
A. F. Kingsley, Battle Creek.
R. D. Sleight, Battle Creek.
M. A. Mortensen, Battle Creek.

Cass—Branch No. 36

.....
.....

Chippewa—Branch No. 35

G. J. Dickenson, Sault Ste. Marie
E. H. Webster, Sault Ste. Marie

Clinton—Branch No. 39

E. Schemer, Fowler.
O. B. Campbell, Ovid.

Delta—Branch No. 38

A. F. Snyder, Escanaba.
A. L. Laing, Rapid River.

Dickinson-Iron—Branch No. 56

.....
.....

Eaton—Branch No. 10

P. H. Quick, Olivet.
C. A. Stimson, Eaton Rapids.

Emmet—Branch No. 41

J. J. Reycraft, Petoskey.
L. W. Gardner, Harbor Springs.

Genesee—Branch No. 24

A. S. Wheelock, Goodrich.
H. E. Randell, Flint.

Gogebic—Branch No. 52

E. Madajeski, Bessemer.
L. O. Houghton, Ironwood.

Grand Traverse—Branch No. 18

E. D. Minor, Traverse City.
J. B. Martin, Traverse City.

Gratiot—Branch No. 25

.....
.....

Hillsdale—Branch No. 3

.....
.....

Houghton—Branch No. 7

S. S. Lee, Osceola.
J. B. Quick, Kearsarge.

Huron—Branch No. 47

D. J. Lackie, Grindstone City.
B. Friedlander, Sebewaing.

Ingham—Branch No. 40

.....
.....

Ionia—Branch No. 16
Chas. S. Cope, Ionia.
Jos. F. Pinkham, Belding.

Isabella-Claire—Branch No. 54
.....
.....

Jackson—Branch No. 27
E. M. Palmer, Brooklyn.

Kalamazoo Academy—Branch No. 64
L. G. Rhodes, South Haven.
A. S. Youngs, Kalamazoo.
E. P. Wilbur, Kalamazoo.
L. E. Ladd, Martin.

Kent—Branch No. 49
F. C. Warnshuis, Grand Rapids.
W. J. DuBois, Grand Rapids.
C. H. Johnston, Grand Rapids.
J. D. Brook, Grandville.
A. M. Campbell, Grand Rapids.
M. E. Roberts, Grand Rapids.

Lapeer—Branch No. 23
John P. Eggleston, Imlay City.
G. L. Chamberlain, Lapeer.

Lenawee—Branch No. 51
L. G. North, Tecumseh.
G. B. M. Seager, Adrian.

Livingston—Branch No. 6
A. W. Cooper, Fowlerville.
B. Glenn, Fowlerville.

Macomb—Branch No. 48
.....
.....

Manistee—Branch No. 19
J. A. Christiansen, Manistee.
Harlan McMullen, Manistee.

Marquette-Alger—Branch No. 28
.....
.....

Mason—Branch No. 17
.....
.....

Mecosta—Branch No. 8
G. H. Lynch, Big Rapids.
L. S. Griswold, Big Rapids.

Menominee—Branch No. 55
H. A. Vennema, Menominee.
Robert. G. Marrimer, Menominee.

Midland—Branch No. 43
.....
.....

Monroe—Branch No. 15
Chas. T. Southworth, Monroe.
J. J. Valade, Newport.

Montcalm—Branch No. 13
W. H. Belknap, Greenville.
A. W. Martin, Howard City.

Muskegon-Oceana—Branch No. 61
F. B. Marshall, Muskegon.
W. E. Dockry, Pentwater.

Newaygo—Branch No. 60
G. N. Nafe, Fremont.
G. G. Burns, Fremont.

Oakland—Branch No. 5
.....
.....

O. M., C. O., R. O., Branch No. 11
C. C. Curnalia, Roscommon.
J. H. Pettis, West Branch.

Ontonagon—Branch No. 66
.....
.....

Osceola-Lake—Branch No. 30
H. L. Foster, Reed City.
A. Holm, Tustin.

Ottawa—Branch No. 32
J. J. Mersent, Holland.
W. G. Winter, Holland.

Presque Isle—Branch No. 63
Martin H. Nester, Rogers City.
Neil C. Monroe, Millersbury.

Saginaw—Branch No. 14
Pearl S. Windham, Saginaw.
W. L. Dickinson, Saginaw.

Sanilac—Branch No. 20
E. G. Robertson, Sandusky.
R. Smith, Carsonville.

Schoolcraft—Branch No. 57
G. M. Livingston, Manistique.
J. W. Saunders, Manistique.

Shiawassee—Branch No. 33
A. L. Arnold, Owosso.
Edwin Elliott, Chesaning.

St. Clair—Branch No. 45
C. H. Treadgold, Port Huron.
Talbert Sleaneau, Port Huron.

St. Joseph—Branch No. 29
A. W. Scidmore, Three Rivers.

Tri-County—Branch No. 62
W. B. Wallace, Manton.
O. L. Ricker, Cadillac.

Tuscola—Branch No. 44

T. W. Hammond, Akron.
A. E. Copp, Tuscola.

Washtenaw—Branch No. 42

Reuben Peterson, Ann Arbor.
Aldred Scott Warthin, Ann Arbor.
John Wm. Keating, Ann Arbor.
Henry W. Schmidt, Chelsea.

Wayne—Branch No. 2

F. B. Tibbals, Detroit.
J. V. White, Detroit.
Guy L. Kiefer, Detroit.
H. R. Varney, Detroit.
Florence Huson, Detroit.
Guy Connor, Detroit.
A. D. Holmes, Detroit.
C. W. Hitchcock, Detroit.
V. C. Vaughan, Jr., Detroit.
W. E. Blodgett, Detroit.
Jas. Cleland, Jr., Detroit.
F. W. Robbins, Detroit.
J. A. MacMillan, Detroit.
G. E. Potter, Detroit.
Francis Duffield, Detroit.
Guy H. McFall, Detroit.
G. E. Frothingham, Detroit.
W. J. Wilson, Jr., Detroit.

ANNOUNCEMENTS

All th Meetings and the Scientific and Commercial Exhibits will be in the one building, The Ridotto.

The Exhibitors will be as follows, up to the time of going to press:

Fairchild Bros. & Foster
Smith Kline and French Co.
Sharp & Smith
A. Kuhlman & Co.
Denver Chemical Co.
Chas. H. Phillips Chemical Co.
O. F. Schmidt Chemical Co.
Ress & Owen
Farlin Ventilated Window Tent Co.

Automobiles in charge of members of the Reception Committee will meet all trains arriving in Bay City during the Annual Meeting, and visiting members are requested to go at once to one of these machines upon arrival, when they will be conveyed to whatever part of town they wish.

The hotel accommodations are ample, and there will be a list of available boarding houses at the Registration window.

	Accommodations		Rates
Wenonah (headquarters)	250	Am.	$2 50-$4.00
		Europ.	1.00- 2.50
Republic	75	Am.	2.00- 2.50
Imperial	50	Europ.	.75- 2.50
Forest City House	50	Am.	1.50- 2.00
Crawford House	75	Europ.	.50- .75
Reuch House	25	Europ.	.50- .75
Colonial House	20	Europ.	.50- .75

AN ACKNOWLEDGMENT

In one of the advertising pages last month we inserted a liner stating that the files of the Michigan State Medical Society did not contain certain numbers of the "Transactions" and asking where they could be obtained.

Within forty-eight hours we received six numbers from Dr. J. A. Wessinger of Ann Arbor and are pleased to thank him for them in the name of the Michigan State Medical Society. We wish also to acknowledge receipt of several volumes of "The Transactions", and some missing numbers of the JOURNAL received from Dr. F. B. Tibbals of Detroit several months ago.

We are endeavoring to complete the Files of Transactions and Journals, and still have the following missing:

Transactions

Vols. 1, 2, 3, 4, 5, 6, 7, 8, 9, 13, 17.

March and August, 1906; January, 1907, May, 1908; and February and December; 1909.

If any reader knows where these missing numbers can be obtained, will he kindly address a postal card to the Secretary of the Michigan State Medical Society, Battle Creek?

COUNTY SOCIETY NEWS

THIRD COUNCILOR DISTRICT

In the Library Rooms, Sturgis, Michigan, July 22 was held a very important medical meeting, representing three factors besides the Literary Program; viz., St. Joseph County Society meeting, Third District Medical meeting, and the 75th Anniversary of the Organization of the first St. Joseph County Medical Society. Branch, Calhoun and St. Joseph counties were well represented. Eaton county had no representative.

The papers were of special merit as well as interest. An unexpected pleasure to us was the presence of Dr. Sheron J. Thoms, who nine years ago left his home at Three Rivers for Mission work in Arabia. Evidently his work there is full of spice and variety as well as "Showers of Blessing" to a people less favored than we are. In his time there he has been through three epidemics of Bubonic Plague. It is very interesting to hear him relate incidents of Mission and Professional life there. His Mission is at Muscat, Oman Province, Arabia.

Dr. L. W. Howe, of Coldwater read a paper on "Tuberculin, Its Use in Diagnosis and Treatment of Tuberculosis." While the action was not specially beneficial in all cases it was an aid and helpful Therapeutic agent in a large per cent of cases.

Dr. Howe made friends who will watch with interest his further study and experience with Tuberculin.

Dr. Richard R. Smith of Grand Rapids came early with his cheery smile and hand shake, which assured all of his hearty earnestness and pleasure, and his paper on "Present Day Tendencies in Gynecology," was what might be expected from a broad conservative mind devoted to the hope and good of the suffering. We hope to welcome him again.

A rising vote of thanks was tendered Drs. Smith and Howe for their very excellent papers.

Arrangements had been made for an Automobile Drive about the city as a closing feature, but the clouds were sifting out moisture so freely it had to be abandoned.

S. R. ROBINSON, *Sec'y.*

EATON

Eaton Co. Medical Society held its third quarterly meeting at Charlotte, Thursday, July 28, 1910.

The general topic of the meeting was Alcohol and its Prescription and Use in Medicine. Papers were read and thoroughly discussed on all sides of the question. Prosecuting Attorney Roy McPeek gave a well thought out talk and papers were read by Dr. Stimson and Mr. Frank Graham, druggist.

A. H. BURLESON, *Sec'y.*

IONIA-MONTCALM

A Correction—In last month's report speaking of inspecting the "Farmers who live in the Valley" we should have said, "Farm which lies in the Valley."

EDITOR.

MUSKEGON-OCEANA

Regular meeting of the Muskegon-Oceana County Medical Society was held at Hart, Michigan, Friday, July 15, 1910, at 5:45 P. M.

Members present: Doctors J. F. Denslow, I. M. J. Hotvedt, W. P. Gamber, G. J. Hartman, Jacob Oosting, Geo. S. Williams, W. A. Campbell, J. T. Cramer and V. A. Chapman of Muskegon, R. G. Olson of Muskegon Heights; Charles F. Smith and L. W. Keyes of Whitehall; J. D. Buskirk and W. L. Griffin of Shelby; J. H. Nicholson and L. P. Munger of Hart; G. F. Lamb and W. E. Dockry of Pentwater. Also present were Doctors W. T. Dodge and J. L. Burkhart of Big Rapids; O. G. Wood of Hart and Geo. S. Root, D D. S., of Hart, G. O. Switzer of Ludington, E. G. Gray of Ludington, W. H. Taylor of Ludington, W. H. Force of Ludington, and F. W. Graham of Ludington; W. C. Martin of Scottsville, L. H. DuGuid of Custer, C. M. Spencer and J. S. Hunt of Freesoil.

Dr. Griffin presented a clinical case of Hyperthyroid. The President, Dr. Denslow, appointed a committee consisting of Doctors W. T. Dodge, Geo. S. Williams, J. H. Nicholson and W. H. Taylor to examine the case and report before the Society. The Committee did so and the case was then brought before the

Society and examined by several members. The case was discussed by Doctors W. H. Taylor, Geo. S. Williams and W. T. Dodge and others.

Dr. Dodge read a paper upon "Vaccine Therapy." The discussion was opened by Dr. W. P. Gamber and followed by Doctors I. M. J. Hotvedt, Geo. S. Williams and W. T. Dodge.

The Society extended an unanimous vote of thanks to Dr. Dodge for the interesting and instructive paper.

Meeting adjourned to the dining hall to dinner.

Following dinner, the Toastmaster, Dr. Denslow, called upon different members present for the good of the order.

The Mason County delegation were given some good advice regarding organization and getting together and the Mason County physicians present, promised to reform and do better and to revive the Mason County Medical Society.

Regular meeting of the Muskegon-Oceana County Medical Society was held at the residence of Dr. B. F. Black of Holton, Friday evening, July 29, 1910, at 7:30 P. M. following dinner at 6:00 o'clock.

Members present: Doctors J. F. Denslow, W. A. Campbell, W. P. Gamber, P. A. Quick, Jacob Oosting, Geo. S. Williams, J. T. Cramer, F. B. Marshall, F. W. Garber, R. C. Olson, V. A. Chapman, of Muskegon, W. L. Griffin, J. D. Buskirk, of Shelby, J. M. VanderVeen of New Era and H. B. Hatch, of Hart. Present from Fremont were Doctors Wm. H. Barnum, Geo. W. Nafe, John W. McNabb, Geo. G. Burns, Nicholas DeHaas, and L. S. Weaver. Dr. S. B. Robison from Hesperia was also present.

Minutes of the last meeting were read and approved.

A paper, "The Diagnosis," was read by Dr. Barnum of Fremont. The discussion was opened by Dr. Geo. S. Williams, followed by Doctors McNabb, Marshall, Griffin, Garber, Nafe, Chapman, Gamber, Hatch, Black, Buskirk, Robison, Griffin, Burns and DeHaas.

Meeting adjourned. A splendid meeting all the way through.

V. A. CHAPMAN, *Sec'y.*

NEWS

Wm. K. Bixby, a former citizen of Adrian, has donated $25,000 for a city Hospital, which will be built on the Crocker property, recently purchased for $6,000. The Hospital will be named in honor of Mr. Bixby's mother, Emma K. Bixby.

New Edition of Gray's Anatomy

A man may be a great anatomist or a great teacher, but when one man combines these two faculties, his single mind, by its complete co-operation, can produce a teaching book in which matter and method blend into a result obtainable in no other way. This double-sided genius was possessed by Henry Gray, and until Nature grants to one individual like endowments, his work will stand. Owing to the incessant activity in all branches of medicine, books in any of its departments are almost invariably shortlived. The single exception to this rule is Gray's Anatomy. In the fifty years since the author's early death it has grown beyond even the leadership in its own subject and has become the foremost medical book in all English literature. As English is now the world-language, this is equivalent to primacy in the medical literature of the world.

Eight editions have been demanded in the course of its half century, and they have enlisted many of the ablest anatomists of this period. The principles on which Gray built his book have been followed, and it is not too much to say that during two generations it has guided the teaching of its subjects in America as well as England. An army of students has conned its pages, and has carried it away into practice, for it is equally valuable to the physician and surgeon for reference on underlying points. In fact, the editor has made the applications of anatomy, in medicine as well as surgery, a special feature.

Of all the editions, this new one represents the most thorough revision. Every line has been scanned for possible improvement. Anything in the nature of a possible obscurity has been clarified, passages have been rewritten, and new developments have been incorporated. Rearrangement has eliminated many

duplications, and this, together with condensation in style, has rendered it possible to present more information in one hundred pages less space, to the reader's obvious advantage. Professor Spitzka, the editor, is one of the foremost anatomists in the world, and he joins to this the apt qualification of being himself an artist as well, so that the drawings from his own hand present his knowledge directly to the mind of the reader. Another of Gray's fundamental improvements, in which his book has always been unique, was the engraving of the names of the parts directly on them, so that the student learned at once not only their nomenclature, but also their position, extent and relations, the four cardinal points. The advantage of this graphic method over the elsewhere customary lines and reference letters is obvious. Gray's book was also the first to contain illustrations in color. In this new edition, besides all the improvements in the text, the splendid series of haracteristic illustrations has been equally revised, many cuts being replaced and more added, and the use of colors is more lavish than ever. No student in any profession, or in any branch of medicine, has offered to him any instrument of instruction comparable to Gray's Anatomy. It suffices to say that the new edition will excel any of its predecessors.

COMMUNICATIONS

Washington, D. C., July 29, 1910.

Dr. J. H. Carstens,
Detroit, Mich.

Dear Sir:

I have your letter of July 27th respecting the meeting of the Michigan State Medical Society on the 27th of September. I find it will be impossible for me to get to Michigan on that date, in fact, I have had to decline a very pressing invitation to address the great Conservation Congress in St. Paul in September by reason of the exigencies of the public service. I can assure you it would give me the greatest pleasure if I could meet with my professional brethren on the occasion of their annual state meeting. I have not time to prepare a paper but I would at least like to send a word of greeting and ask you to say to the assembled physicians that I appreciate what the profession is doing in the way of promoting public health and protecting our people against infection, epidemic, and the results of the pollution of streams, also in the promotion of the campaign for purity in foods and drugs. I trust that the efforts of the physicians of the country looking to the establishment of a National Department of Health with a seat in the President's Cabinet may in the near future be crowned with success. It is only by such an organization that the full fruits of medical activity may be gathered and proper protection of the public secured.

With sincerest personal regards, I am,

Faithfully,

H. W. Wiley

MEDICAL ECONOMICS

The Case of the People vs. Rice

Appealed from the Genesee Circuit Court to the Supreme Court of the State of Michigan. Opinion by Judge Ostrander.

Dr. Rice was convicted in the Circuit Court under act 107 of the Public Acts of 1909. He was charged with bad faith in writing a prescription for liquor for a man under an alias.

The charge of the Circuit Judge was to the effect that section 11930, providing that accessories to a felony are chargeable with that felony, held in this case.

The Doctor admitted having written a prescription for liquor without having examined the patient to see that he needed it, the man receiving the prescription being a notorious drunkard. The conviction was reversed in the Supreme Court. The opinion expressed by Judge Ostrander is of interest.

"We do not find in the statute an intention to punish physicians for issuing prescriptions for liquor in bad faith. We mean by this that apt terms are not found to create a substantive offense, the elements of which are writing and delivering carelessly or dishonestly prescriptions for liquor. If physicians are amenable to the pains and penalties of the act it is because they have indirectly, but intentionally, brought about a sale of liquor to

be used as a beverage. They do not, in issuing prescriptions in bad faith, occupy the position of merely practicing subterfuge or telling untruths in order to secure liquor. The law intends that sales may be made upon prescriptions. It intends that no sale shall be made otherwise than upon prescriptions. It has made the prescription, and therefore the physician, potential in securing liquor. In this way a physician becomes a party to every sale made upon his certificate. Nevertheless, we are constrained to say that unless there is open or tacit collusion between the druggist and the physician so that the actual sale is unlawful because, though made upon a certificate proper in form, it is made in bad faith, the law is not so written as to make the conduct of the physician unlawful. It is not so written that an intention can be found to make a particular sale lawful as to the druggist and unlawful as to the physician. And the doctrine and the statutes which make accessories before the fact, and aiders and abettors, principals can have no application if the ultimate act of selling is lawful."

BOOK NOTICES

International Clinics. A quarterly of illustrated clinical lectures and especially prepared original articles by the leading members of the medical profession throughout the world. Edited by H. W. Cattell, A. M., M. D., 20th series, Vol. II. Philadelphia and London; J. B. Lippincott Co., 1910.

This volume of International Clinics is full of useful information well presented. The paper by Dr. Frank Billings on Gall Bladder Infections is especially good. Besides all the other good things is a very entertaining article by Dr. Roland G. Curtin on Book Plates of Medical Men, with remarks on the Physician's Leisure Hour "Hobbies." This number is a very worthy companion to the many which have gone before.

The Practical Medicine Series. Comprising ten volumes of the year's progress in medicine and surgery, edited by Gustavus P. Head, M. D., and Charles L. Mix, A. M., M. D., Chicago, The Year-Book Publishers.

Vol. I General Medicine. Edited by Frank Billings, M. D, and J. H. Salisbury, M. D., $1.50 net, Series $10.00

This book of over four hundred pages is replete with new advances in the subject of General Medicine, New Methods of Diagnosis, New Methods of Treatment, New Signs and Symptoms, New Observations on Etiology. References to name and journal are given whenever any important fact is quoted, and these ournals are practically all dated 1909 and 1910, showing that in compiling this book the latest authorities have always been consulted.

Vol. II, Surgery, edited by J. B. Murphy, A. M., M. D., LL. D., Chicago, $2.00 net.

The different methods of anæsthesia are carefully considered, especially ethyl chlorid, rectal anæsthesia, mixed (chloroform two parts, ether three parts), scopolamin-morphine, and local anæsthesia. Dr. Murphy thinks local anæsthesia is being used by many surgeons in about 25% of their work. The article on Hernia is a valuable one and is handsomely illustrated, as is the whole of the book and series.

Vol. III, Eye, Ear, Nose and Throat, edited by Casey A. Wood; Albert H. Andrews and Gustavus P. Head, Chicago, $1.50 net.

This book is as full of useful information as the others of this well-known series. It contains especially interesting discussions of the Major Smith Cataract operation, Mastoiditis, the Internal Ear and the status of the tonsil operation. An enormous amount of writing is now appearing relative to the removal of the tonsils, and this is well summarized.

This series of books is intended primarily for the general practitioner, but is so arranged that the specialist can secure the part relative to his especial branch of medicine.

A Text-Book of Pathology. By Joseph McFarland M. D., Professor of Pathology and Bacteriology in the Medico-Chirurgical College of Philadelphia, Second edition. Octavo of 856 pages, with 437 illustrations, some in colors. Philadelphia and London: W. B. Saunders Company, 1910. Cloth, $5.00 net; Half Morocco, $6.50 net.

This second edition follows the first after six years and is an index of the advance of Pathology during that time, being thoroughly up-to-date. To those familiar with McFarland's first edition we need say nothing. To others, suffice it to say that the book is not only a general Pathology but also a "special" Pathology. It is profusely illustrated and is written in a pleasant and readable style—a desideratum so necessary in such a subject.

Diseases of the Skin. A Manual for Students and Practitioners by Alfred Schalek, M. D., Professor of Dermatology, University of Nebraska. Second edition, thoroughly revised, illustrated with 47 engravings. Lea & Febiger, Philadelphia and New York.

To the specialist all manuals are objectionable in that they usually attempt to teach too much in too small a space, placing the diseases described in an alphabetical order, with no system of classification, no fixing of the relationship of one disease to the other or to the general economy. Ordinarily, the practitioner or student gets but a vague, unsatis-

factory idea of the disease, which may be of the most serious importance, and from which he may draw unwarranted conclusions. To some extent Prof. Schalek has surmounted these defects. A classification is suggested; a gross description of the anatomy of the skin, its general symtomatology and diagnosis, with general internal and external therapeutic notes is given. As the Manual is most likely to be used by the student of medicine to enable him to prepare himself for examination, the system of questions at the end of the description of the disease is not without value.

With these, to our mind, decided limitations, in so far as it goes, the Manual is well edited in Prof. Schalek's clear, concise style, the printing is good and the illustrations are as fair as one should expect in a Manual.

Practical Suggestions in Borderland Surgery for the Use of Students and Practitioners. By Gustavus M. Blech, M. D., Professor of Clinical Surgery, Medical Department Loyola University, Chicago; Director-in-chief Illinois Legion American Red Cross; Surgeon-in-Chief Abraham Lincoln Hospital, Chicago, Professional Publishing Company, Philadelphia, 1910. $1.50 net.

A timely book full of friendly suggestions. No effort to teach technic is made but an honest, fair, impartial and just criticism of the surgical methods in vogue marks every page of the book, and makes it at once the most valuable and unique volume of the library. Specially designed for the student and beginner, it will be of more value to the General Practitioner, the occasional operator and to the Specialist himself. Dr. Blech has taken a long step forward toward crystalizing surgical thought on many lines and points that in the past have been neglected.

It is better worth the price asked than any other surgical work on the market today.

The Practitioner's Case Book. For recording and preserving clinical histories. Prepared and arranged by the Editorial staff of the Interstate Medical Journal. Imperial octavo; 286 pages; full cloth binding. Printed on bond writing paper, with 85 colored anatomical charts (detachable), showing outlines of body and skeleton in light red and the viscera in pale blue. Index for listing patients, both by name and case number. St. Louis: Interstate Medical Journal Co. 1910. Price, postpaid, $2.00.

The importance of carefully kept case records cannot easily be overestimated. By this means not only is an opportunity afforded to study at leisure the salient points in each clinical case, and make comparisons, but the physician is prompted as to all important events occurring in the course of the disease. This information may prove of invaluable service in arriving at a clear understanding with the patient, his friends, the druggist or the consulting physician.

A simple, clear, comprehensive and effectual scheme for keeping such records is presented to the practitioner in the book before us, "The Practitioner's Case Book."

Specialists have long recognized the importance of Case Records. In this book a means is afforded practitioners of keeping such data of the case as will enable them at any time to know exactly what was done, said or promised at a given time—information that may save much inconvenience or even trouble.

A Manual of Operative Surgery. By Sir Frederick Treves, Bart., G. C. V. O., C. B., LL.D., F. R. C. S. Sergeant-Surgeon to H. M. the King, Surgeon-in-Ordinary to H. R. H. the Prince of Wales, Consulting Surgeon to the London Hospital, and Jonathan Hutchinson, F. R. C. S. Surgeon to, and Lecturer on Surgery at the London Hospital, Examiner in Surgery to the Royal University, Belfast. Third Edition, Vol. II. Lea & Febiger. Philadelphia and New York, 1910.

Volume II, Operative Surgery, by Sir Frederick Treves, has made its appearance. The high standard set by this author is perfectly maintained. In this volume the field covered is the Head, Neck, Spine, Thorax, Breast, Arteries, Veins, Nerves, Amputations, Bones Joints, Tendons, Muscles, Ligaments and Fasciae.

A general comprehensive plan of discussing each operation is pursued somewhat as follows,—A brief discussion of indications, various methods of operating, circumstances; viz, Hemorrhage, Nerve Injuries, etc., extent of operation, preliminary measures, instruments required, position. The operation, technic of; comments. Under comments the comparisons and criticisms of the various operations proposed by different authors are valuable features, affording great aid in determining the course to be pursued in a given case, and must be of immense help in giving an authoritative prognosis on any method used, both as to recovery and functions interfered with.

Rare skill in composition combined with excellent judgment and a perfect command of English has enabled the Author to be exhaustive and yet brief, profound, yet clear, easy of comprehension and interesting. Every operation is described. No important detail is omitted. All dangers are pointed out and warning sounded.

SURGERY

Conducted by

R. E. BALCH, M. D., Kalamazoo, Mich.

The Relation of the Blood-vessel Walls to Coagulation of the Blood—Bertram M. Bernheim, in the Journal of the A. M. A. of July 23, reports the results of experiments upon different animals to determine the cause of rapid coagulation of blood when in contact with the adventitia. In the course of his blood-vessel surgery he discovered that the success of blood vessel suture depended upon excluding the adventitia from the line of anastomosis. In considering this it seemed possible that the action of the adventitia might be not wholly mechanical but due to a substance secreted. Experiments:

1. A dog was bled to death and its aorta removed. The vessel was then separated into its three parts, adventitia, media and intima. The three coats then ground up in mortars, and extracts made of each. Blood was now obtained from another dog and to one c.c. of fluid plasma and 0.5 c.c. of serum, 0.5 c.c. of the extract of the adventitia was added. A solid clot formed in one and one-half minutes. The same results followed use of the intima and of the media, showing that all three coats acted alike. With this knowledge then, all three coats of the vessel were ground up together for future experiments.

From the vessels of another dog an extract was made using all three coats of both arteries and veins. Two test-tubes thoroughly cleaned and oiled were taken, in one of which a few drops of the extract were placed, and in the other nothing at all. A second dog was then placed on the table and after being etherized a canula which had been cleaned and oiled was placed in one of its carotids. Three c.c. of blood were allowed to flow into each test tube. In forty-five seconds a clot formed in the tube containing the extract. The blood in the other remained fluid for from 2½ to 4 minutes, the usual coagulation time for a dog.

2. An extract was made from the veins and arteries of a chicken which had been previously bled to death. Two oiled test-tubes, one treated with this extract and the other empty, were taken, and the blood from another chicken was allowed to flow into each. A solid clot formed in the one containing the extract in one and one-half minutes. The other remained fluid over a day.

Experiments upon pigs and other animals gave the same results.

Remote Results of the Replantation of the Kidney and Spleen.—In the March *Journal of Experimental Medicine*, Alexis Carrel gives a preliminary report of the experimental work along this line. Two points were to be elucidated. First, can an organ which underwent section of its vessels and nerves, a complete interruption of its circulation, and a perfusion of Locke's solution functionate normally for a very long period of time? Second, what is then its anatomical condition?

He answered the first question as follows: On Feb. 6, 1908, he removed the left kidney of a bitch, washed it and perfused it with Locke's solution and replanted. The circulation was interrupted for fifty minutes. Fifteen days later the opposite kidney was removed. The animal remained in perfect health and the following year gave birth to eleven pups, in June. In December, she again had three pups. Twenty-three months have elapsed and she is still in perfect health.

Four other experiments have been performed to study the anatomical condition of the organ. Experiments Nos. 1 and 2. The left kidneys of two dogs were removed; placed in a jar of Locke's solution and perfused. The kidney was then placed in the abdominal cavity; artery, vein and ureter resutured; and the external wound closed. The interruption of the circulation was 50 minutes and 46 minutes respectively. In both cases the animal made a perfect recovery.

They were later killed and upon autopsy, there were found to be no anatomical changes.

Experiment No. 3. Medium sized white dog. Upon February 4th the spleen was removed with ligature of the gastro-splenic vessels which were abnormally large. The splenic artery and vein which were abnormally small, were ligated. The spleen was removed and placed in a jar of Locke's solution. The spleen was replanted and the vessels sutured. The lumen of the splenic artery was only 0.5 mm and the suture was difficult. Two weeks later exploratory laparotomy was performed. The spleen was incised; hemorrhage very dark. Probable occlusion of the artery. Fourteen months later, a second exploratory laparotomy, the spleen had completely disappeared.

Experiment No. 4. The same technique as in experiment No. 3. The circulation was interrupted for 44 minutes. Sixteen months later, exploratory laparotomy shows spleen normal. Five months after laparotomy the dog was killed by accident. Autopsy showed spleen normal.

The five experiments mentioned in this article demonstrate that the section of the vessels of the spleen and kidney of a dog, the section of their nerves and the suspension of their circulation for fifty minutes and their perfusion with Locke's solution do not modify their functions of their anatomical conditions.

DERMATOLOGY AND SYPHILIS

Conducted by

ANDREW P. BIDDLE, M. D., Detroit, and R. A. C. WOLLENBERG, M. D., Detroit

The Treatment of Furunculosis.—Dr. Bowen refers to the staphylococcus pyogenes aureus as the usual etiological factor in furunculosis, infection taking place in a hair or sebaceous follicle. He further refers to the fact that furuncles are propagated by auto-inoculation, the new lesion being produced by infection from an old one; that diabetes, debility, and albuminuria increase susceptibility to infection; that external irritants to the skin, of whatever nature, also facilitate their development; but that in many cases the cause for the peculiar susceptibility to inoculation of the follicles with the staphylococcus is unknown.

Dr. Bowen does not believe that early incision shortens the duration; nor does he recommend poulticing, as it is contrary to aseptic precautions.

Full credit is given to the advantages of the vaccine treatment. All cases do not respond to it, however, and he gives the following local treatment as one to which a considerable number of cases have yielded after having been treated by the vaccine method by most competent people without any success:

The principle is simply to keep the skin as far as possible sterile.

In the first place the patient is directed to wash the whole body with warm water and soap in the morning and at night, this part of the treatment being most essential. When furuncles have been confined to the neck it may be sufficient to wash only the upper part of the body. After thorough washing of the body with soap and water, and the skin having been dried, the whole surface is bathed with a saturated solution of boracic acid in water, which is preferred to other antiseptics. The skin is then allowed to dry without wiping, and the individual furuncles are dressed with an ointment consisting of

Boracic acid	4.
Precipitated sulphur,	4.
Carbolized petrolat,	32.

The individual lesions are not opened until they have become very painful and mature. All clothing next to the skin is changed daily to prevent reinoculation from the collars or underclothing. The general condition should be improved by internal and hygienic measures.

This method has rarely failed when carried out with care and patience, and in the author's experience has frequently succeeded where the vaccine treatment had failed—*Jour. Am. Med. Ass'n.*, July 16, 1910.

The Value of Wassermann's Reaction.—J. E. R. McDonagh states that for all practical purposes a positive Wassermann proves the presence of syphilis. Similar reactions are obtained with leprosy and trypanosomiasis, but these diseases on account of their rarity should not detract from the practicability of the test. The reaction which Wassermann described is considered the most trustworthy, though laborious. Endeavors to elucidate the cause of the reaction and to do away with its empiricism will lead to far better results than any attempts to simplify the technique. Positive and negative reactions are interpreted as they occur in the various stages of the disease.

Primary stage—A positive reaction in the case of a doubtful sore is proof positive of syphilis, and patient should receive treatment at once. A negative reaction is valueless, since before any secondaries have appeared not more than 40 per cent. of the cases react positive.

Secondary stage—Here the interpretation of the result depends upon whether the patient has been treated or not, and how soon after stopping treatment the examination is made.

When no sign is present 80 per cent. are positive, the positive results indicating active virus and calling for treatment. The remaining 20 per cent. may be negative (a) because the syphilitic virus has disappeared or is dormant, and there is no specific antibody in the serum; (b) because the patient is taking mercury. Patients in category (a) should be treated if they have not been treated before.

Mercury converts a positive to a negative reaction, and no examination should be made until three weeks after the last dose.

Negative results are produced most quickly after the use of mercurial inunctions, less quickly after injections, and very slowly after oral administration.

Tertiary Syphilis—Seventy per cent of all cases give positive results. Cases are considered cured when there are no symptoms and the test gives a negative result. In those who have no symptoms, but give a positive result, visceral lesions are suspected.

One hundred per cent. of cases of general paresis and 60 per cent. of cases of tabes give a positive result.

Potassium iodide has **not** the power of converting a positive into a negative reaction, therefore cannot be regarded as a specific for syphilis, as is so commonly held. Mercury alone has this power.—*The British Journal of Dermatology*, May 1910.